



Confidentiality Requested:

Yes  No

KANSAS CORPORATION COMMISSION 1070692  
OIL & GAS CONSERVATION DIVISION

Form ACO-1

August 2013

Form must be Typed  
Form must be Signed  
All blanks must be Filled

WELL COMPLETION FORM  
WELL HISTORY - DESCRIPTION OF WELL & LEASE

OPERATOR: License # \_\_\_\_\_

Name: \_\_\_\_\_

Address 1: \_\_\_\_\_

Address 2: \_\_\_\_\_

City: \_\_\_\_\_ State: \_\_\_\_\_ Zip: \_\_\_\_\_ + \_\_\_\_\_

Contact Person: \_\_\_\_\_

Phone: ( \_\_\_\_\_ ) \_\_\_\_\_

CONTRACTOR: License # \_\_\_\_\_

Name: \_\_\_\_\_

Wellsite Geologist: \_\_\_\_\_

Purchaser: \_\_\_\_\_

Designate Type of Completion:

- New Well       Re-Entry       Workover
- Oil       WSW       SWD       SIOW
- Gas       D&A       ENHR       SIGW
- OG       GSW       Temp. Abd.
- CM (Coal Bed Methane)
- Cathodic       Other (Core, Expl., etc.): \_\_\_\_\_

If Workover/Re-entry: Old Well Info as follows:

Operator: \_\_\_\_\_

Well Name: \_\_\_\_\_

Original Comp. Date: \_\_\_\_\_ Original Total Depth: \_\_\_\_\_

- Deepening       Re-perf.       Conv. to ENHR       Conv. to SWD
- Plug Back       Conv. to GSW       Conv. to Producer
- Commingled      Permit #: \_\_\_\_\_
- Dual Completion      Permit #: \_\_\_\_\_
- SWD      Permit #: \_\_\_\_\_
- ENHR      Permit #: \_\_\_\_\_
- GSW      Permit #: \_\_\_\_\_

Spud Date or Recompletion Date	Date Reached TD	Completion Date or Recompletion Date
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API No. 15 - \_\_\_\_\_

Spot Description: \_\_\_\_\_

\_\_\_\_\_ - \_\_\_\_\_ - \_\_\_\_\_ Sec. \_\_\_\_\_ Twp. \_\_\_\_\_ S. R. \_\_\_\_\_  East  West

\_\_\_\_\_ Feet from  North /  South Line of Section

\_\_\_\_\_ Feet from  East /  West Line of Section

Footages Calculated from Nearest Outside Section Corner:

- NE       NW       SE       SW

GPS Location: Lat: \_\_\_\_\_, Long: \_\_\_\_\_  
(e.g. xx.xxxxx)      (e.g. -xxx.xxxxx)

Datum:  NAD27       NAD83       WGS84

County: \_\_\_\_\_

Lease Name: \_\_\_\_\_ Well #: \_\_\_\_\_

Field Name: \_\_\_\_\_

Producing Formation: \_\_\_\_\_

Elevation: Ground: \_\_\_\_\_ Kelly Bushing: \_\_\_\_\_

Total Vertical Depth: \_\_\_\_\_ Plug Back Total Depth: \_\_\_\_\_

Amount of Surface Pipe Set and Cemented at: \_\_\_\_\_ Feet

Multiple Stage Cementing Collar Used?  Yes  No

If yes, show depth set: \_\_\_\_\_ Feet

If Alternate II completion, cement circulated from: \_\_\_\_\_

feet depth to: \_\_\_\_\_ w/ \_\_\_\_\_ sx cmt.

Drilling Fluid Management Plan

(Data must be collected from the Reserve Pit)

Chloride content: \_\_\_\_\_ ppm Fluid volume: \_\_\_\_\_ bbls

Dewatering method used: \_\_\_\_\_

Location of fluid disposal if hauled offsite:

Operator Name: \_\_\_\_\_

Lease Name: \_\_\_\_\_ License #: \_\_\_\_\_

Quarter \_\_\_\_\_ Sec. \_\_\_\_\_ Twp. \_\_\_\_\_ S. R. \_\_\_\_\_  East  West

County: \_\_\_\_\_ Permit #: \_\_\_\_\_

AFFIDAVIT

I am the affiant and I hereby certify that all requirements of the statutes, rules and regulations promulgated to regulate the oil and gas industry have been fully complied with and the statements herein are complete and correct to the best of my knowledge.

Submitted Electronically

KCC Office Use ONLY

- Confidentiality Requested  
Date: \_\_\_\_\_
- Confidential Release Date: \_\_\_\_\_
- Wireline Log Received
- Geologist Report Received
- UIC Distribution
- ALT  I  II  III Approved by: \_\_\_\_\_ Date: \_\_\_\_\_

1070692

Operator Name: \_\_\_\_\_ Lease Name: \_\_\_\_\_ Well #: \_\_\_\_\_

Sec. \_\_\_\_\_ Twp. \_\_\_\_\_ S. R. \_\_\_\_\_  East  West County: \_\_\_\_\_

**INSTRUCTIONS:** Show important tops of formations penetrated. Detail all cores. Report all final copies of drill stems tests giving interval tested, time tool open and closed, flowing and shut-in pressures, whether shut-in pressure reached static level, hydrostatic pressures, bottom hole temperature, fluid recovery, and flow rates if gas to surface test, along with final chart(s). Attach extra sheet if more space is needed.

Final Radioactivity Log, Final Logs run to obtain Geophysical Data and Final Electric Logs must be emailed to kcc-well-logs@kcc.ks.gov. Digital electronic log files must be submitted in LAS version 2.0 or newer AND an image file (TIFF or PDF).

Drill Stem Tests Taken <i>(Attach Additional Sheets)</i>	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Log	Formation (Top), Depth and Datum	<input type="checkbox"/> Sample
Samples Sent to Geological Survey	<input type="checkbox"/> Yes <input type="checkbox"/> No	Name	Top	Datum
Cores Taken	<input type="checkbox"/> Yes <input type="checkbox"/> No			
Electric Log Run	<input type="checkbox"/> Yes <input type="checkbox"/> No			
List All E. Logs Run:				

CASING RECORD <input type="checkbox"/> New <input type="checkbox"/> Used							
Report all strings set-conductor, surface, intermediate, production, etc.							
Purpose of String	Size Hole Drilled	Size Casing Set (In O.D.)	Weight Lbs. / Ft.	Setting Depth	Type of Cement	# Sacks Used	Type and Percent Additives

ADDITIONAL CEMENTING / SQUEEZE RECORD				
Purpose:	Depth Top Bottom	Type of Cement	# Sacks Used	Type and Percent Additives
<input type="checkbox"/> Perforate				
<input type="checkbox"/> Protect Casing				
<input type="checkbox"/> Plug Back TD				
<input type="checkbox"/> Plug Off Zone				

Did you perform a hydraulic fracturing treatment on this well?  Yes  No *(If No, skip questions 2 and 3)*

Does the volume of the total base fluid of the hydraulic fracturing treatment exceed 350,000 gallons?  Yes  No *(If No, skip question 3)*

Was the hydraulic fracturing treatment information submitted to the chemical disclosure registry?  Yes  No *(If No, fill out Page Three of the ACO-1)*

Shots Per Foot	PERFORATION RECORD - Bridge Plugs Set/Type Specify Footage of Each Interval Perforated	Acid, Fracture, Shot, Cement Squeeze Record <i>(Amount and Kind of Material Used)</i>	Depth

TUBING RECORD:      Size: \_\_\_\_\_ Set At: \_\_\_\_\_ Packer At: \_\_\_\_\_ Liner Run:  Yes  No

Date of First, Resumed Production, SWD or ENHR: \_\_\_\_\_ Producing Method:  
 Flowing  Pumping  Gas Lift  Other *(Explain)* \_\_\_\_\_

Estimated Production Per 24 Hours	Oil Bbls.	Gas Mcf	Water Bbls.	Gas-Oil Ratio	Gravity

<b>DISPOSITION OF GAS:</b> <input type="checkbox"/> Vented <input type="checkbox"/> Sold <input type="checkbox"/> Used on Lease <i>(If vented, Submit ACO-18.)</i>	<b>METHOD OF COMPLETION:</b> <input type="checkbox"/> Open Hole <input type="checkbox"/> Perf. <input type="checkbox"/> Dually Comp. <input type="checkbox"/> Commingled <i>(Submit ACO-5)</i> <input type="checkbox"/> Other <i>(Specify)</i> _____	<b>PRODUCTION INTERVAL:</b> _____ _____
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Conservation Division  
Finney State Office Building  
130 S. Market, Rm. 2078  
Wichita, KS 67202-3802



Phone: 316-337-6200  
Fax: 316-337-6211  
<http://kcc.ks.gov/>

Mark Sievers, Chairman  
Ward Loyd, Commissioner  
Thomas E. Wright, Commissioner

Sam Brownback, Governor

January 09, 2012

Tom Denning  
TDI, Inc.  
1310 BISON RD  
HAYS, KS 67601-9696

Re: ACO1  
API 15-051-26190-00-00  
Charlotte 1  
SE/4 Sec.15-15S-19W  
Ellis County, Kansas

Dear Production Department:

We are herewith requesting that the Well Completion Form ACO-1 and attached information for the subject well be held confidential for a period of two years.

Should you have any questions or need additional information regarding subject well, please contact our office.

Respectfully,  
Tom Denning





**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

**FLUID SUMMARY**

TDI, Inc.  
1310 Bison Rd.  
Hays, Ks 67601  
ATTN: Herb Deines

**15/15S/19W-Ellis**  
**Charlotte #1**  
Job Ticket: 45261      **DST#: 1**  
Test Start: 2011.10.12 @ 11:22:15

## Mud and Cushion Information

Mud Type: Gel Chem	Cushion Type:	Oil API:	deg API
Mud Weight: 9.00 lb/gal	Cushion Length: ft	Water Salinity:	9500 ppm
Viscosity: 46.00 sec/qt	Cushion Volume: bbl		
Water Loss: 5.19 in <sup>3</sup>	Gas Cushion Type:		
Resistivity: 0.73 ohm.m	Gas Cushion Pressure: psig		
Salinity: 3800.00 ppm			
Filter Cake: inches			

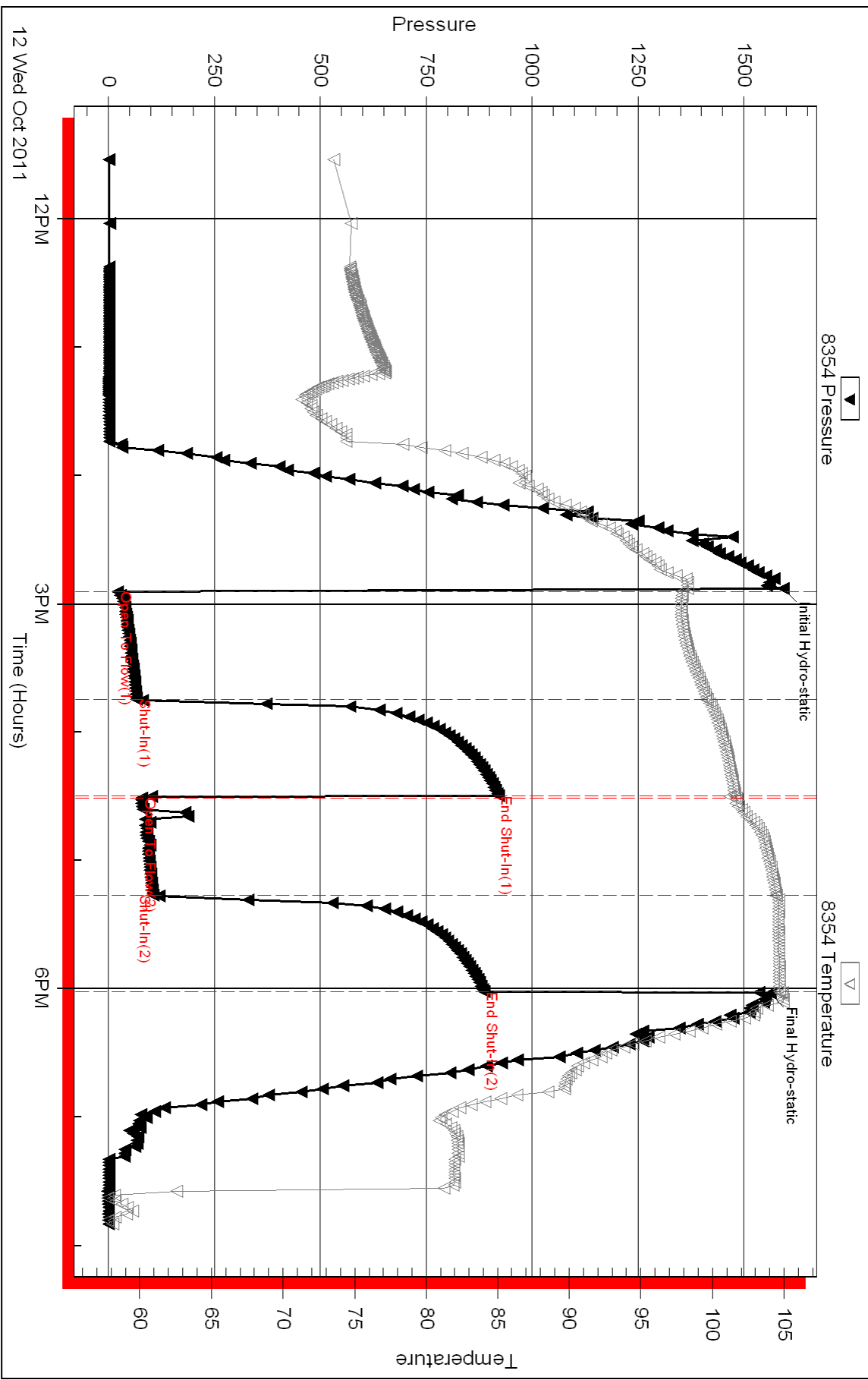
## Recovery Information

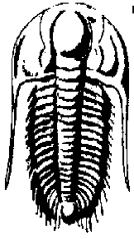
Recovery Table

Length ft	Description	Volume bbl
60.00	80%Water/20%Mud	0.559
120.00	60%Water/40%Mud	1.683

Total Length: 180.00 ft      Total Volume: 2.242 bbl  
 Num Fluid Samples: 0      Num Gas Bombs: 0      Serial #:  
 Laboratory Name:      Laboratory Location:  
 Recovery Comments:

### Pressure vs. Time





**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

TDI, Inc.  
1310 Bison Rd.  
Hays, Ks 67601  
ATTN: Herb Deines

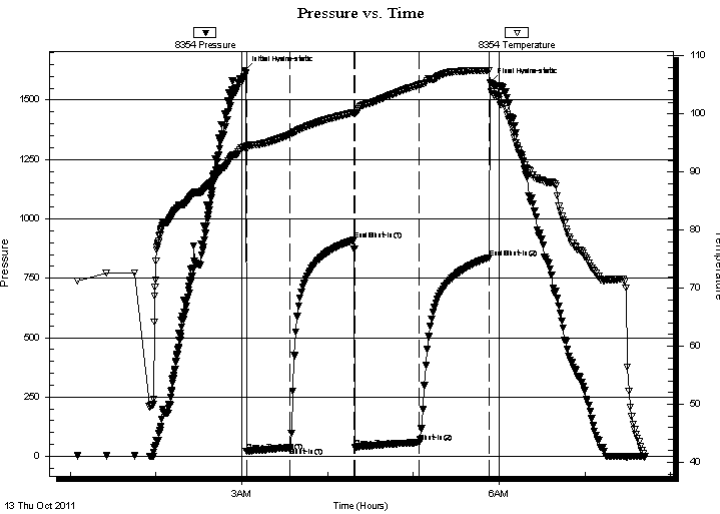
**15/15S/19W-Ellis**  
**Charlotte #1**  
Job Ticket: 45262      **DST#: 2**  
Test Start: 2011.10.13 @ 00:55:15

## GENERAL INFORMATION:

Formation: **LKC "D"**  
 Deviated: No Whipstock:                      ft (KB)  
 Time Tool Opened: 03:03:15  
 Time Test Ended: 07:42:15  
 Interval: **3338.00 ft (KB) To 3365.00 ft (KB) (TVD)**  
 Total Depth: 3365.00 ft (KB) (TVD)  
 Hole Diameter: 7.85 inches Hole Condition: Fair  
 Test Type: Conventional Bottom Hole (Initial)  
 Tester: Dustin Rash  
 Unit No: 38  
 Reference Elevations: 2004.00 ft (KB)  
 1996.00 ft (CF)  
 KB to GR/CF: 8.00 ft

**Serial #: 8354      Inside**  
 Press @ Run Depth: 59.64 psig @ 3340.00 ft (KB)      Capacity: 8000.00 psig  
 Start Date: 2011.10.13      End Date: 2011.10.13      Last Calib.: 2011.10.13  
 Start Time: 01:05:15      End Time: 07:42:15      Time On Btm: 2011.10.13 @ 03:02:15  
 Time Off Btm: 2011.10.13 @ 05:53:45

**TEST COMMENT:** IF-Weak building blow . Built to 5 inches.  
 IS-No Return.  
 FF-Weak building blow . Built to 5 inches.  
 FS-No Return.



## PRESSURE SUMMARY

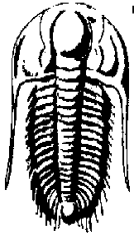
Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1624.94	94.23	Initial Hydro-static
1	20.23	93.78	Open To Flow (1)
32	38.68	96.46	Shut-In(1)
76	910.16	100.23	End Shut-In(1)
77	39.13	100.10	Open To Flow (2)
122	59.64	104.97	Shut-In(2)
171	836.66	107.42	End Shut-In(2)
172	1573.38	105.44	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
90.00	85%Water/15%Mud	1.26

## Gas Rates

Choke (inches)	Pressure (psig)	Gas Rate (Mcf/d)



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TESTING, INC.**

# DRILL STEM TEST REPORT

**FLUID SUMMARY**

TDI, Inc.  
1310 Bison Rd.  
Hays, Ks 67601  
ATTN: Herb Deines

**15/15S/19W-Ellis**  
**Charlotte #1**  
Job Ticket: 45262      **DST#: 2**  
Test Start: 2011.10.13 @ 00:55:15

## Mud and Cushion Information

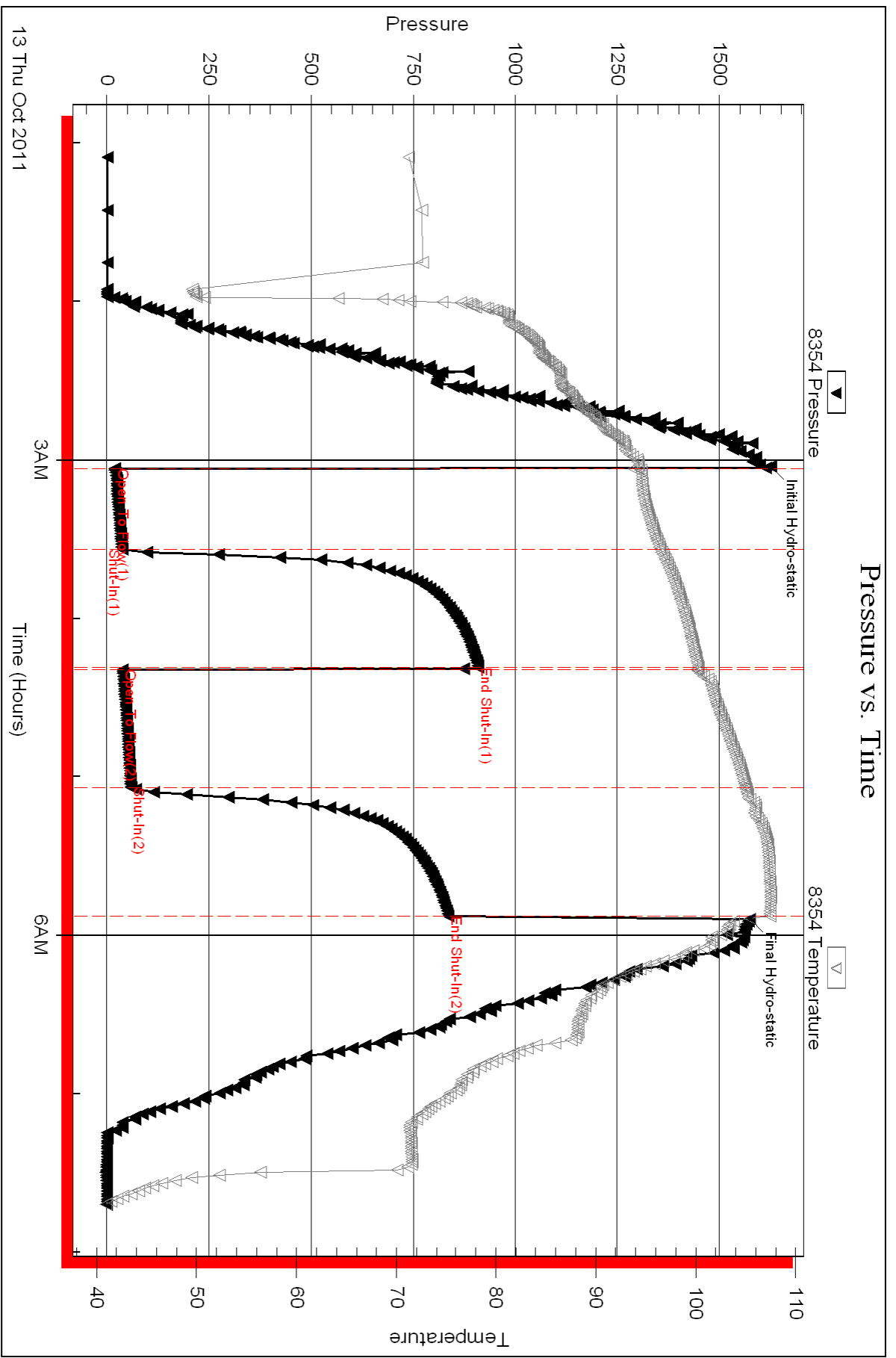
Mud Type: Gel Chem	Cushion Type:	Oil API:	deg API
Mud Weight: 9.00 lb/gal	Cushion Length: ft	Water Salinity:	5500 ppm
Viscosity: 46.00 sec/qt	Cushion Volume: bbl		
Water Loss: 5.20 in <sup>3</sup>	Gas Cushion Type:		
Resistivity: 0.19 ohm.m	Gas Cushion Pressure: psig		
Salinity: 3800.00 ppm			
Filter Cake: inches			

## Recovery Information

Recovery Table

Length ft	Description	Volume bbl
90.00	85%Water/15%Mud	1.262

Total Length: 90.00 ft      Total Volume: 1.262 bbl  
 Num Fluid Samples: 0      Num Gas Bombs: 0      Serial #:  
 Laboratory Name:      Laboratory Location:  
 Recovery Comments:



HERB DEINES  
CONSULTING GEOLOGIST  
PH. 816-825-3380  
HAYS, KS 67601

108 W. 35th ST.  
COMPANY TDI Inc  
WELL Channel #1  
FIELD  
COUNTY Ellis STATE Kansas

LOGGING BY: HSO FSL & LSS, FEL, SE/H  
Log Tech SEC 15 TYP 15a RCE 19a  
1 Day Landed Log 4  
2 Day Landed Log 5  
3 Day Landed Log 6

Contractor: Southwind Drilling Co. 418 21  
Completed 10-14-2011  
RTO 34881  
Surface casing 8 3/4" set to 1202' w/ 3255 SMD  
Production casing

Date	Depth	Activity	Date	Depth	Activity
10-05-11	989'	Spud			
10-06-11	989'	Run down for Astoria			
10-07-11	989'	Run down for Astoria			
10-08-11	989'	Run down for Astoria			
10-08-11	1204'	Run 5' from Cemented			
10-08-11	1795'	Day			
10-11-11	2520'	Day			
10-12-11	3330'	CE5 DST (L.A.G.C)			
10-13-11	3635'	DST (L.A.G.C)			
10-14-11	3680'	RTD Loss: P=0			

REMARKS: Show zones in upper LKC Test and Recovered salt water. Conglomerate sand did not develop and Arbuckle too low. Recommendation: To plug and abandon well.

Herb Deines

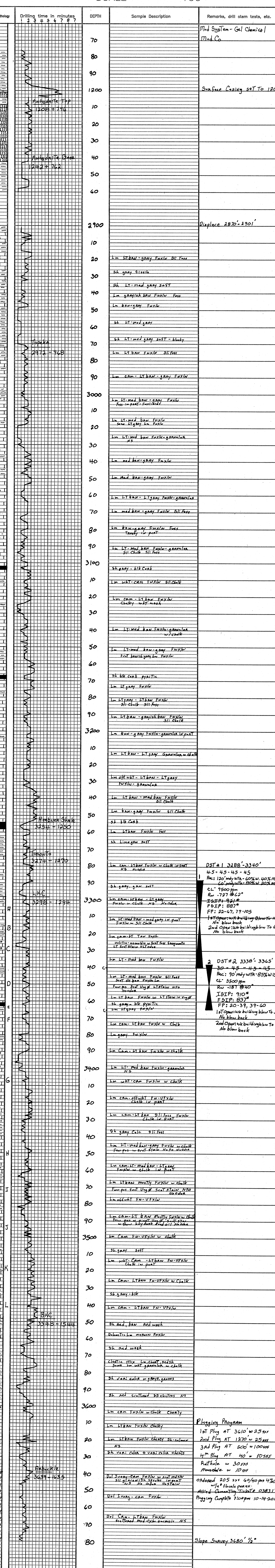
Formation	Sample	Log	Datum	* Formation	Sample	Log	Datum	*
Anhydrite Top		1203	+ 796					
Anhydrite Base		1242	+ 762					
Topoka		2972	- 968					
Heaburn Shale		3254	- 1250					
Toronto		3274	- 1270					
LKC		3298	- 1294					
BKC		3548	- 1544					
Arbuckle		3639	- 1635					
Reservoir Sand		MT Resched						
RTD	3680							
LTD	3681		- 1677					

\* Structural Position to:

LEGEND

--	--	--	--	--	--	--	--	--

SCALE " = 100'



Plugging Program  
1st Plug AT 3610' w 25 sxs  
2nd Plug AT 1270' w 25 sxs  
3rd Plug AT 500' w 100 sxs  
4th Plug AT 40' w 10 sxs  
Rathole w 30 sxs  
Mudschale w 10 sxs  
Ordered 205 sxs 40/40 pas 4% Gel  
w/ 1/4" floccs per 4%  
All-Ed Cementing Ticket # 038317  
Plugging Complete 7:00pm 10-14-2011

Slope Survey 3680' 1/2"



# ALLIED CEMENTING CO., LLC. 038317

Federal Tax I.D.# 20-5975804

REMIT TO P.O. BOX 31  
RUSSELL, KANSAS 67665

SERVICE POINT:

*Russell KS*

DATE <u>10-14-2011</u>	SEC. <u>15</u>	TWP. <u>15S</u>	RANGE <u>19W</u>	CALLED OUT	ON LOCATION	JOB START <u>3:00 PM</u>	JOB FINISH <u>3:30 PM</u>
LEASE <u>CHARLOTTE</u>	WELL# <u>1</u>	LOCATION <u>ANTONINO KS, 1W 3S 1/4 NW N100</u>			COUNTY <u>ELLIS</u>	STATE <u>KANSAS</u>	
OLD OR NEW (Circle one)							

CONTRACTOR SOUTH WIND DALLAS RIG #1

TYPE OF JOB ROTARY Plug

HOLE SIZE 7 7/8 T.D. 3680

CASING SIZE 8 5/8 S&W DEPTH

TUBING SIZE DEPTH

DRILL PIPE 4 1/2 x-4 DEPTH 3610

TOOL DEPTH

PRES. MAX MINIMUM L

MEAS. LINE SHOE JOINT

CEMENT LEFT IN CSG.

PERFS.

DISPLACEMENT

OWNER

CEMENT AMOUNT ORDERED 205 SX 40 480 GEL  
4 # FLO Seal Per SX

COMMON	<u>123</u>	@	<u>16.25</u>	<u>1998.75</u>
POZMIX	<u>82</u>	@	<u>8.50</u>	<u>697.00</u>
GEL	<u>7</u>	@	<u>21.25</u>	<u>148.75</u>
CHLORIDE		@		
ASC		@		
	<u>Flo Seal 51#</u>	@	<u>2.70</u>	<u>137.70</u>
		@		
		@		
		@		
		@		
HANDLING	<u>212</u>	@	<u>2.25</u>	<u>477.00</u>
MILEAGE	<u>111/119/26</u>			<u>816.20</u>
TOTAL				<u>4275.40</u>

EQUIPMENT

PUMP TRUCK CEMENTER Glen

# 417 HELPER Woody

BULK TRUCK

# 481 DRIVER Don

BULK TRUCK

# DRIVER

REMARKS:

25 SX @ 360'

25 SX @ 12' 10'

100 SX @ 500'

10 SX @ 40' Swiper Plug

30 SX @ Rockhole

15 SX @ mouse hole

THANKS

SERVICE

DEPTH OF JOB

PUMP TRUCK CHARGE 1250.00

EXTRA FOOTAGE @

MILEAGE 35 @ 7.00 245.00

MANIFOLD @

@

35 @ 4.00 140.00

TOTAL 1635.00

CHARGE TO: T.D.T. Inc.

STREET

CITY STATE ZIP

PLUG & FLOAT EQUIPMENT

8 5/8 Dry Hole Wiper @ N-C

@

@

@

@

TOTAL

To Allied Cementing Co., LLC.  
You are hereby requested to rent cementing equipment and furnish cementer and helper(s) to assist owner or contractor to do work as is listed. The above work was done to satisfaction and supervision of owner agent or contractor. I have read and understand the "GENERAL TERMS AND CONDITIONS" listed on the reverse side.

PRINTED NAME Derby Keever

SIGNATURE [Signature]

SALES TAX (If Any)

TOTAL CHARGES 5910.40

DISCOUNT 202 IF PAID IN 30 DAYS



# Dual Induction Log

DIGITAL LOG (785) 625-3858

API No.	15-051-26190-00-00	
Company	TDL, Inc.	
Well	Charlotte No. 1	
Field	Wildcat	
County	Ellis	State
		Kansas
Location	NW - SE - SE - SE 430' FSL & 655' FEL	
Sec: 15	Twp: 15 S	Rge: 19 W
Other Services	CNL/CDL	

Permanent Datum	Ground Level	Elevation 1994
Log Measured From	Kelly Bushing	10 Ft. Above Perm. Datum
Drilling Measured From	Kelly Bushing	
Date	10/14/2011	
Run Number	One	
Depth Driller	3680	
Depth Logger	3681	
Bottom Logged Interval	3680	
Top Log Interval	1200	
Casing Driller	8.615 @ 1202	
Casing Logger	1204	
Bit Size	7.875	
Type Fluid in Hole	Chemical	
Salinity, ppm CL	4000	
Density / Viscosity	8.8	48
pH / Fluid Loss	10.5	5.4
Source of Sample	Flowline	
Rm @ Meas. Temp	1.10 @ 60	
Rmf @ Meas. Temp	0.83 @ 60	
Rmc @ Meas. Temp	1.49 @ 60	
Source of Rmf / Rmc	Charts	
Rm @ BHT	0.59 @ 113	
Operating Rig Time	2-1/2 Hours	
Max Rec. Temp. F	113	
Equipment Number	17	
Location	Hays	
Recorded By	B. Becker	
Witnessed By	Tom Denning	
		Herb Deines

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All interpretations are opinions based on inferences from electrical or other measurements and we cannot and do not guarantee the accuracy or correctness of any interpretation, and we shall not, except in the case of gross or willful negligence on our part, be liable or responsible for any loss, costs, damages, or expenses incurred or sustained by anyone resulting from any interpretation made by any of our officers, agents or employees. These interpretations are also subject to our general terms and conditions set out in our current Price Schedule.

### Comments

Thank you for using Log-Tech, Inc.  
 (785) 625-3858

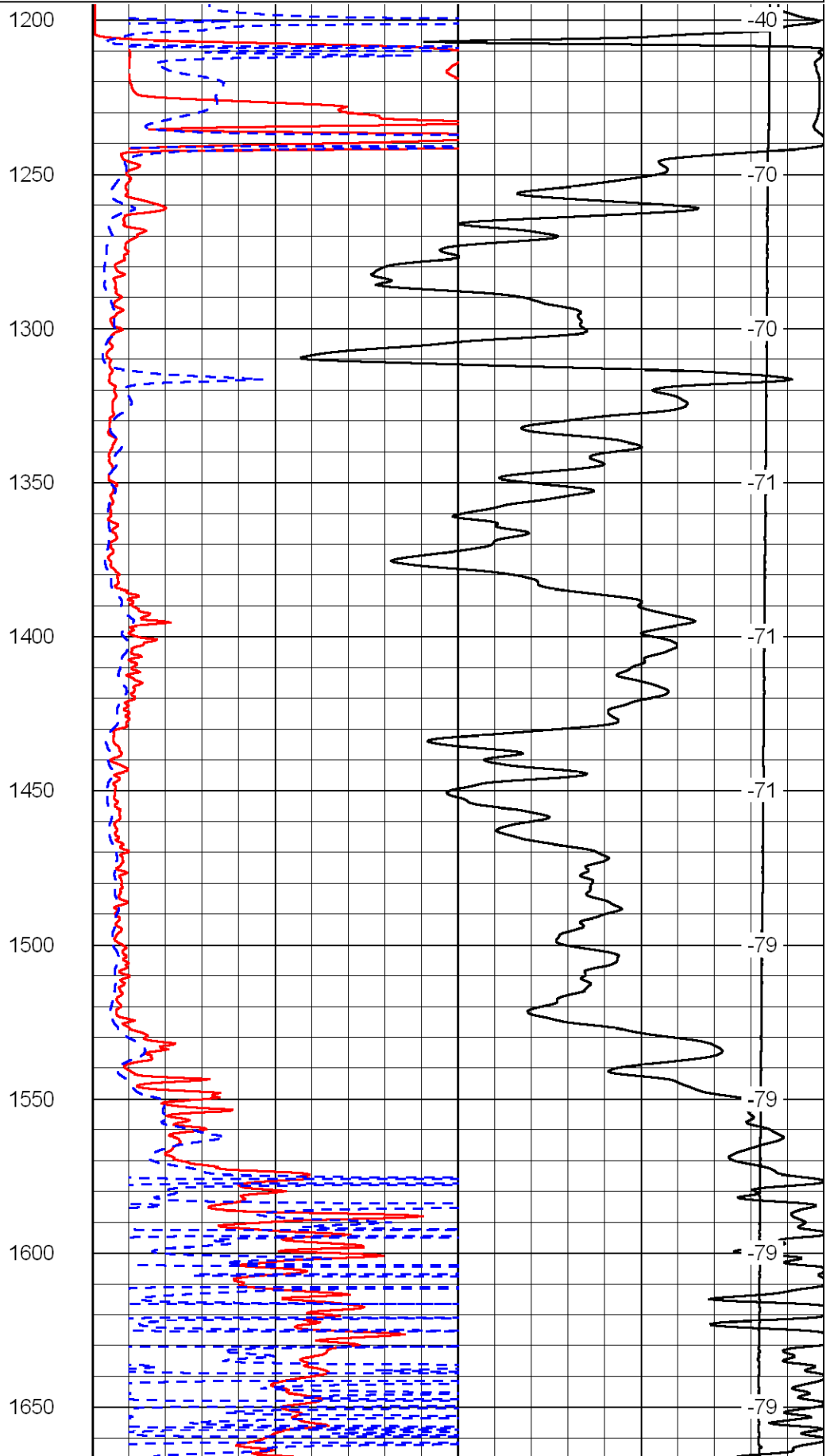
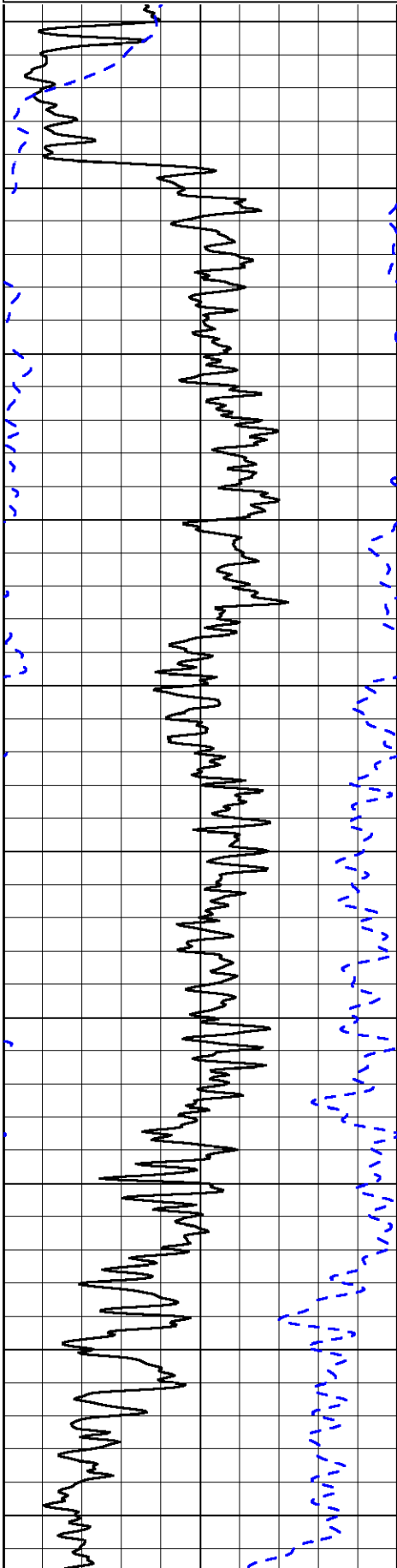
Antonino, Ks; 3 South; 1-1/8 West;  
 North into location

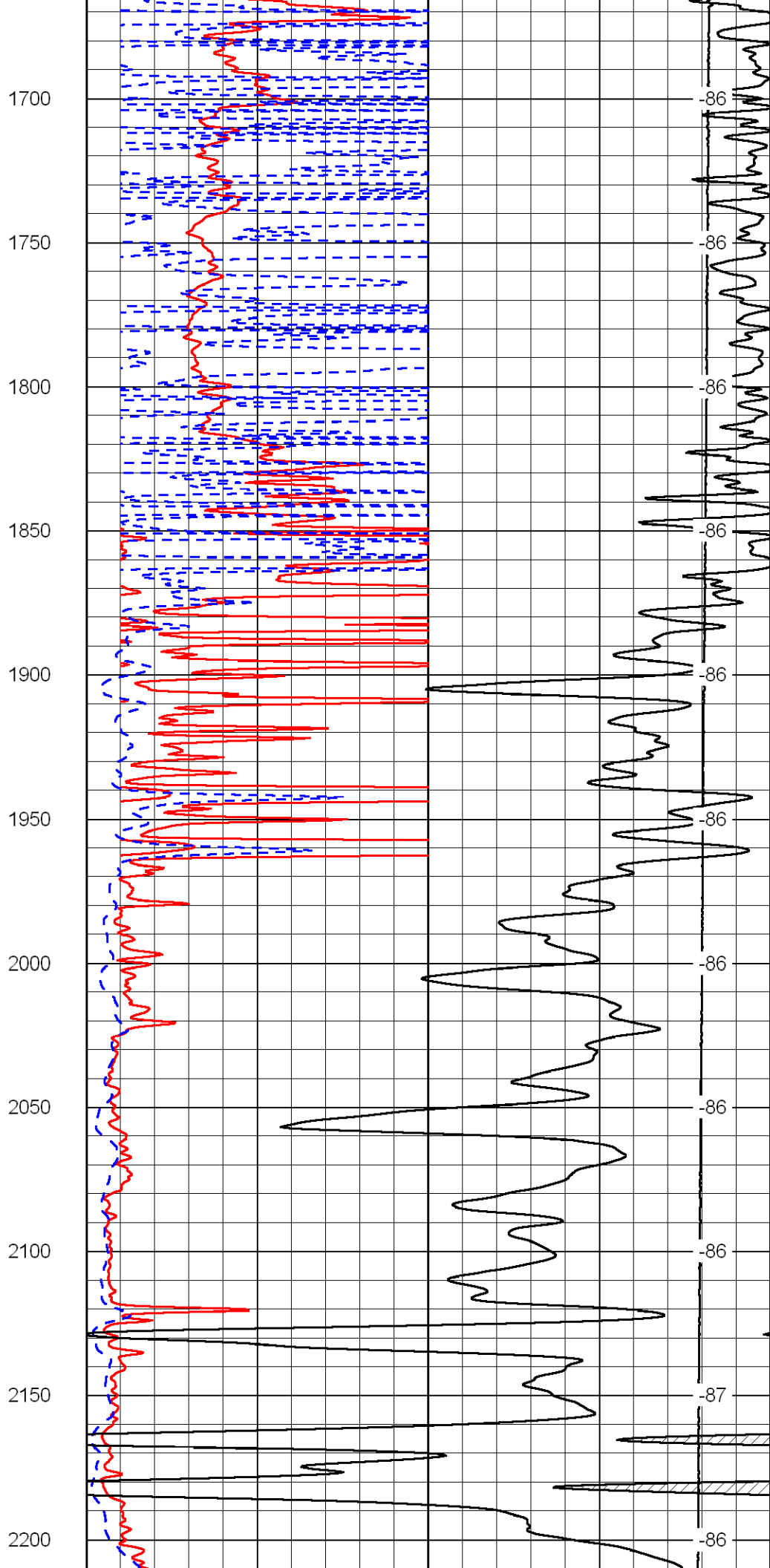
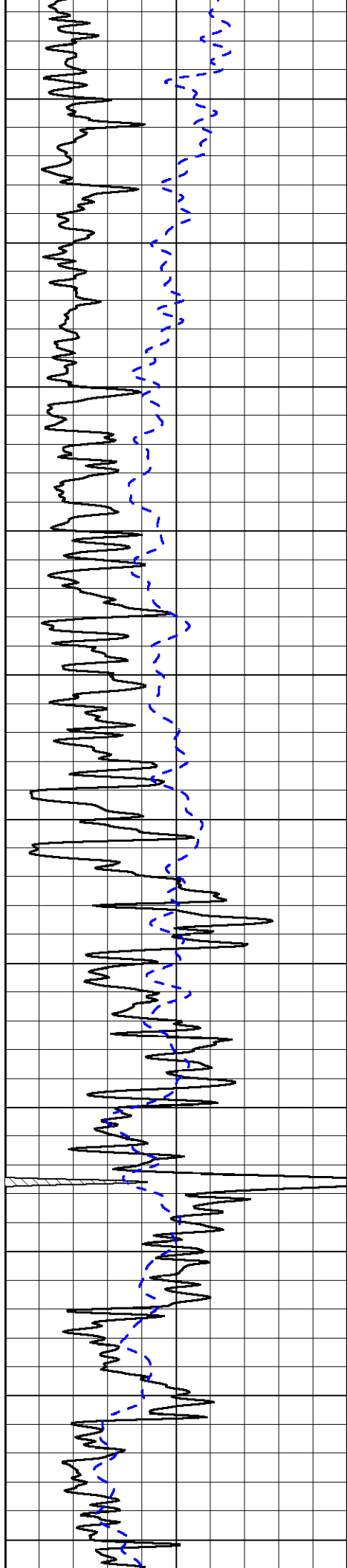
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 Charted by: Depth in Feet scaled 1:600

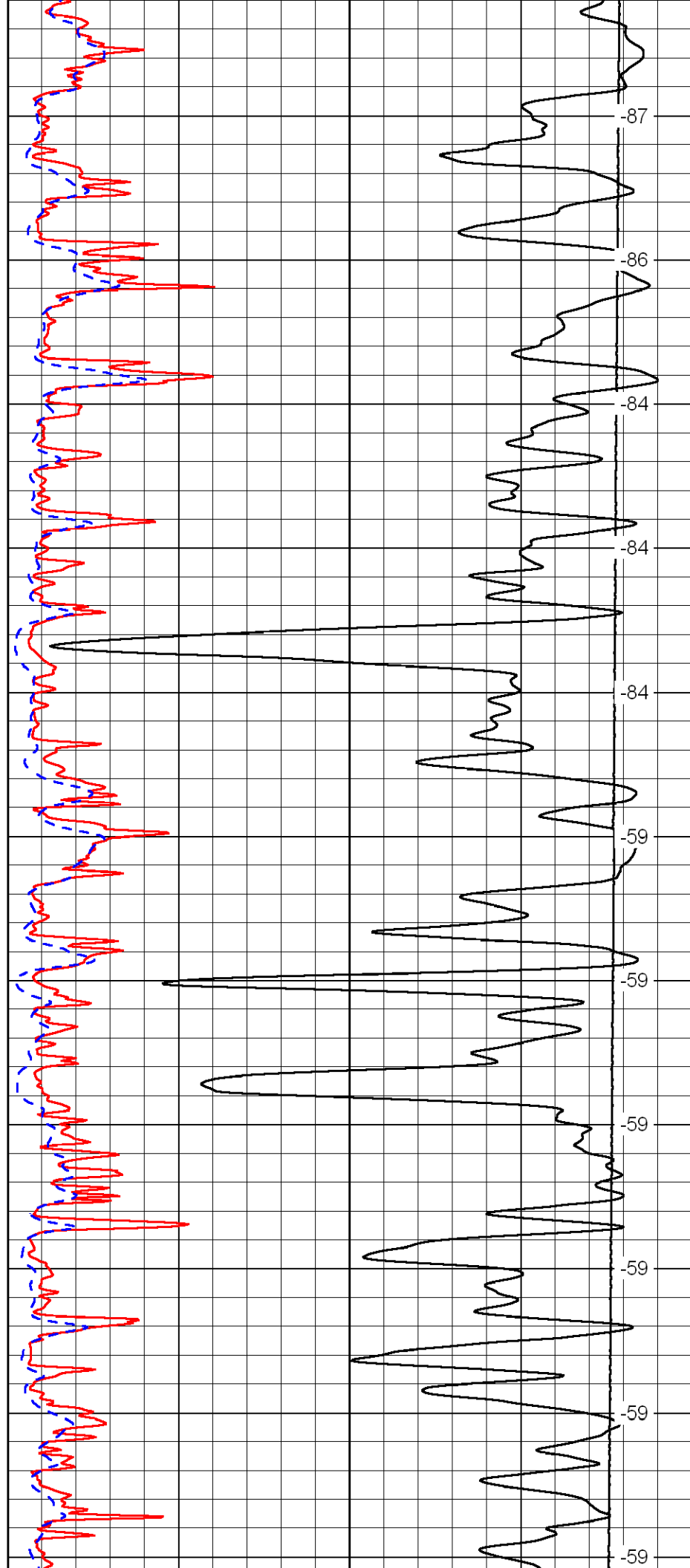
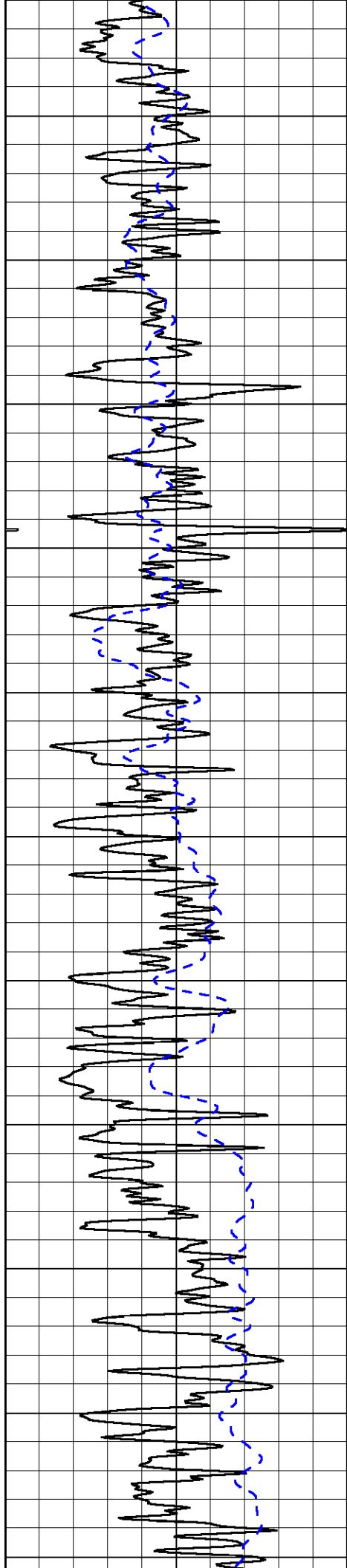
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-200	SP	0

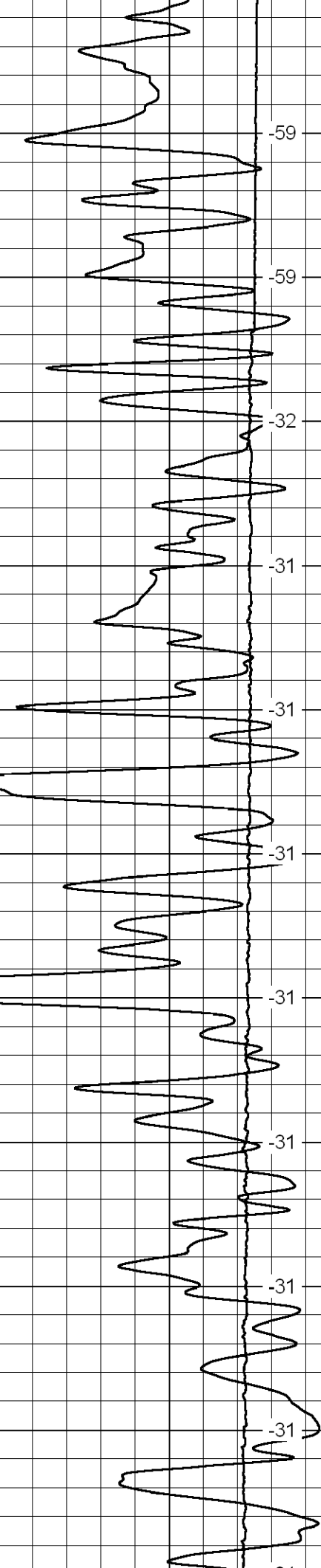
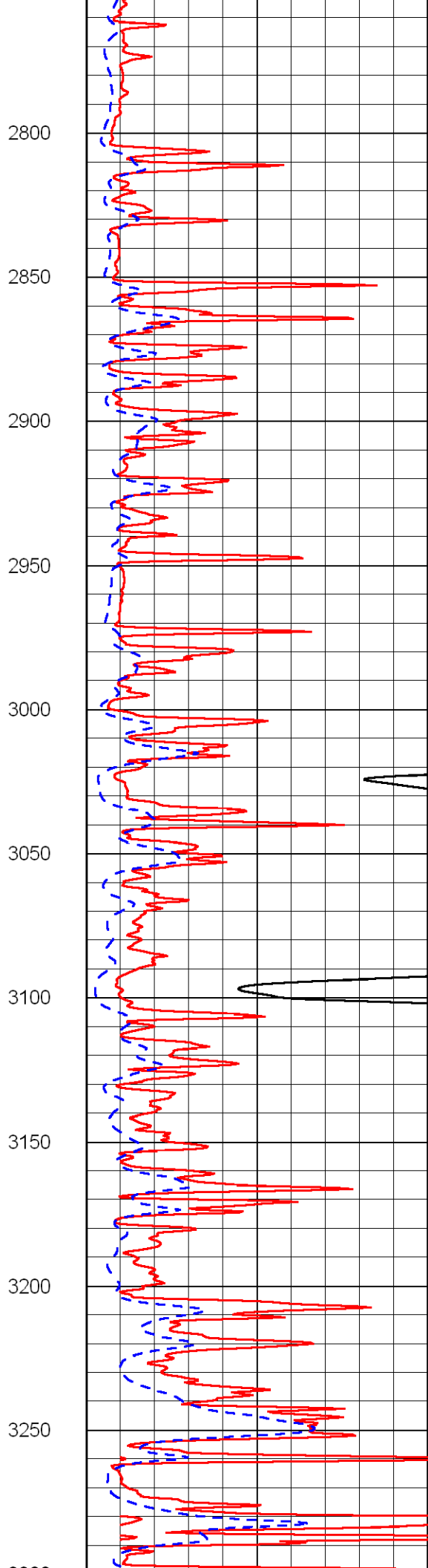
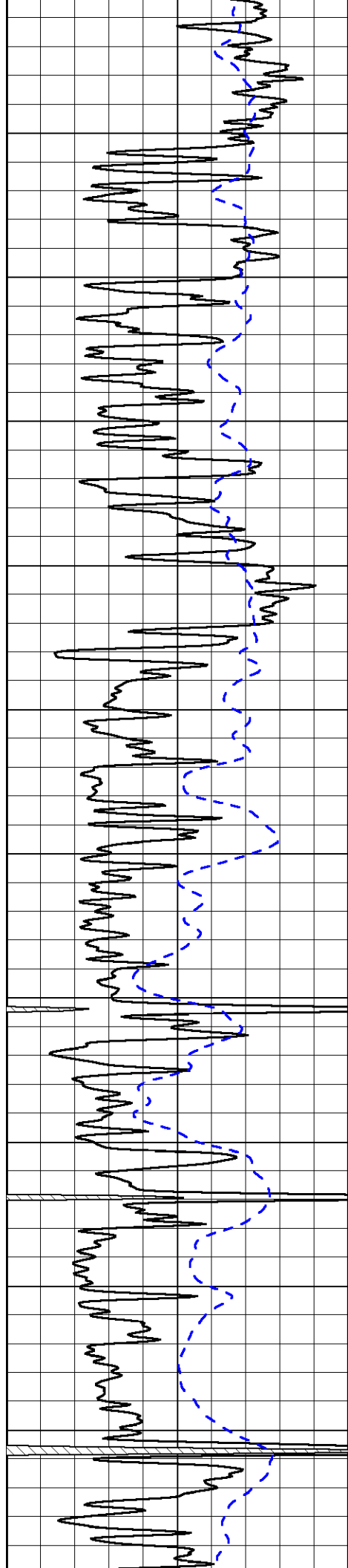
0	Shallow Resistivity	50
0	Deep Resistivity	50
1000	Conductivity	0
15000	Line Tension	0

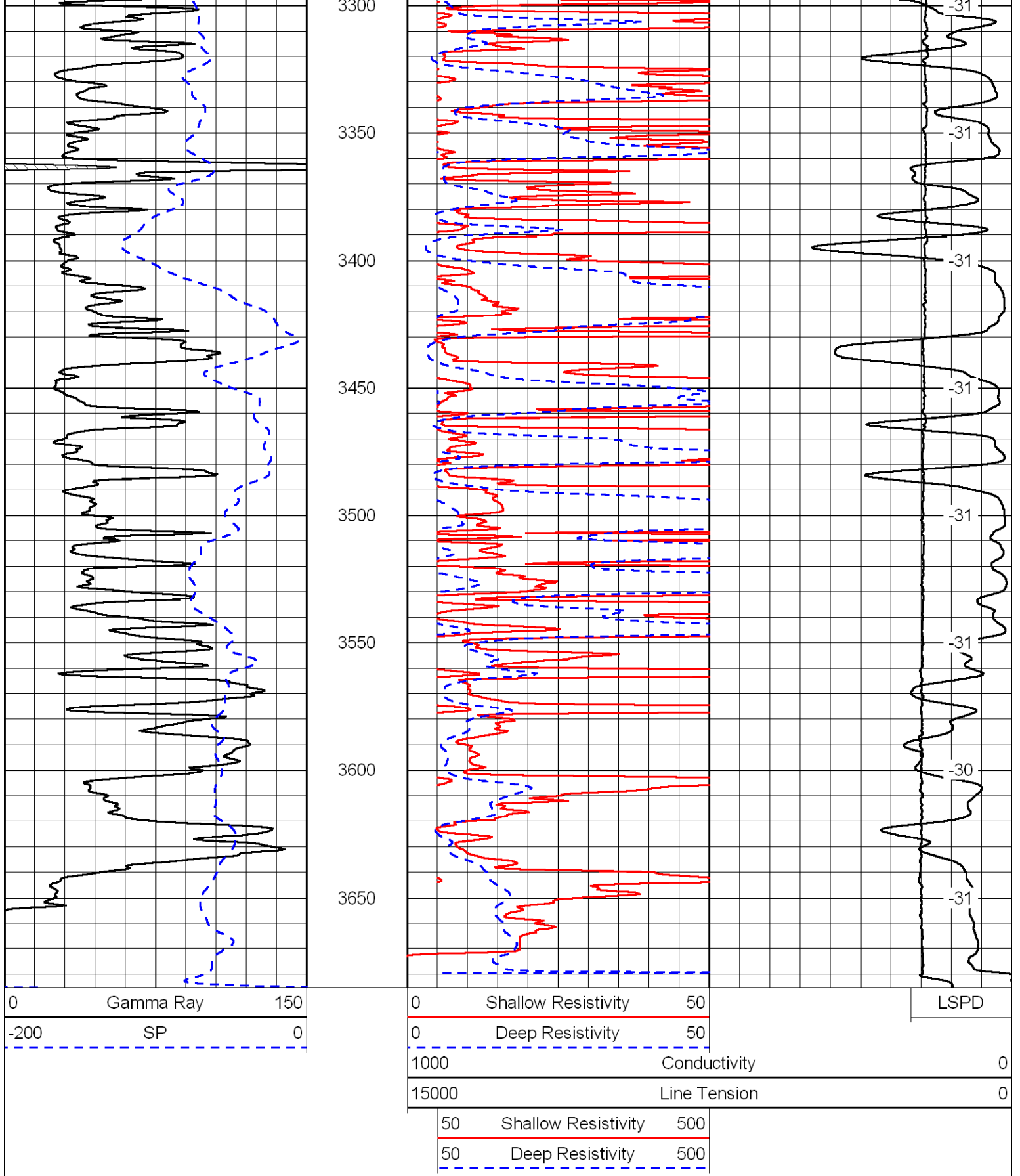
50	Shallow Resistivity	500
50	Deep Resistivity	500



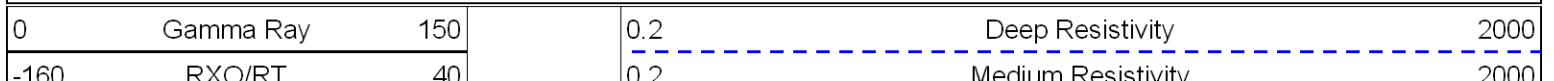








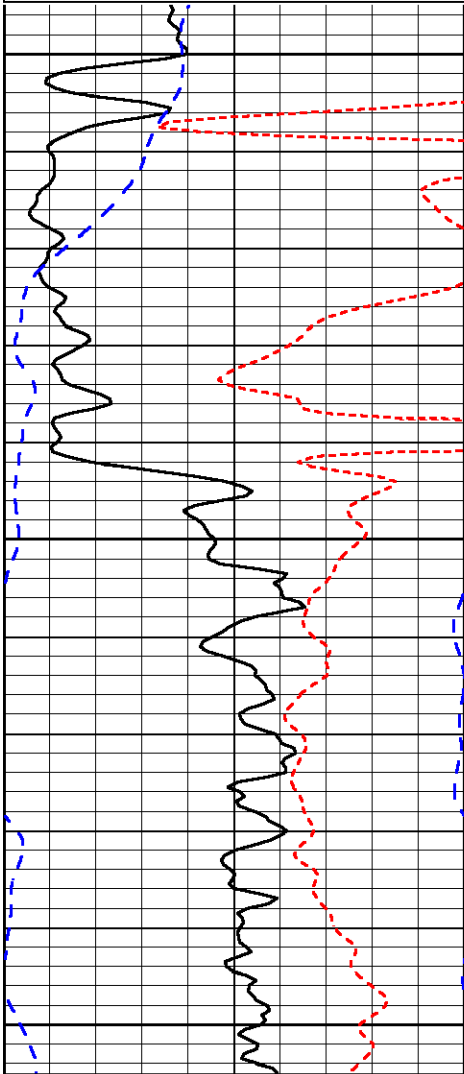
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 Dataset Pathname: DIL/tdistk  
 Presentation Format: dil  
 Dataset Creation: Fri Oct 14 07:34:48 2011  
 Charted by: Depth in Feet scaled 1:240



100 RXO/RT 0  
 -200 SP 0

0.2 Medium Resistivity 2000  
 10000 Shallow Resistivity 0

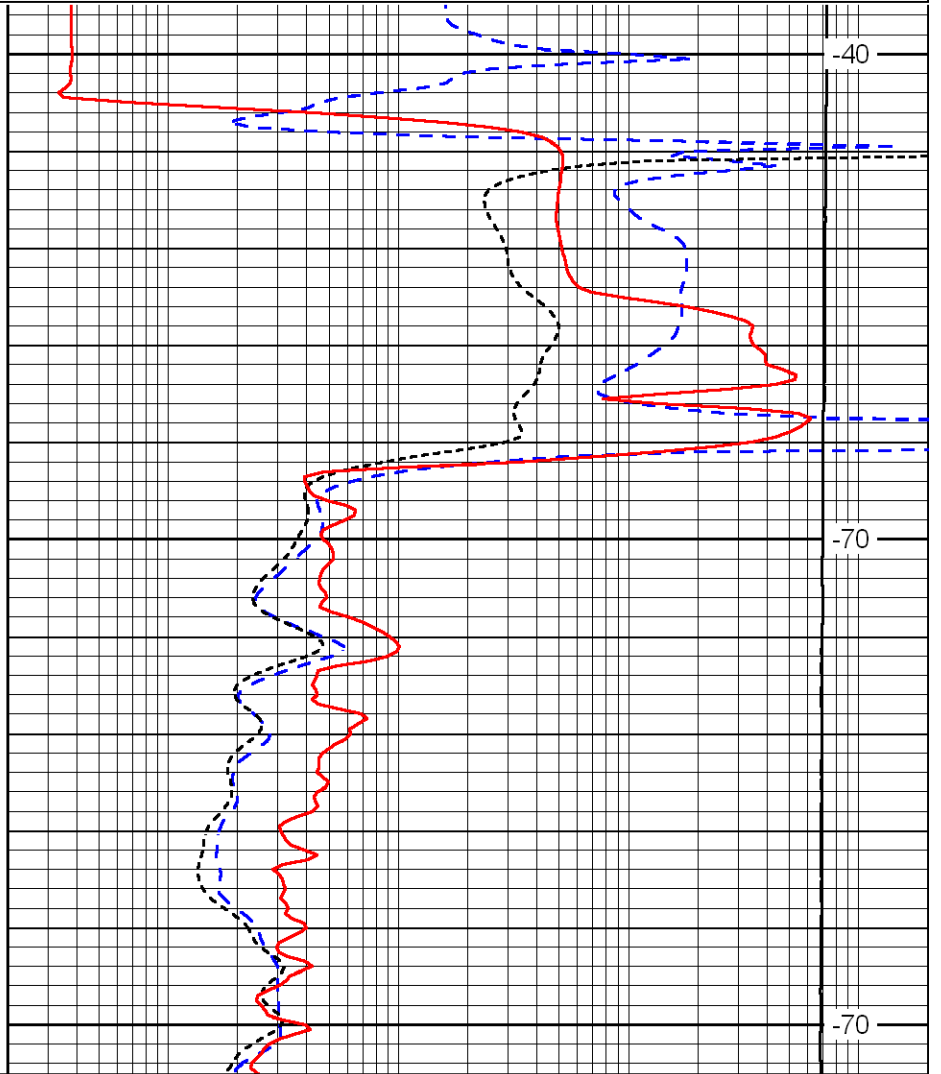
LSPD



1200

1250

1300



-40

-70

-70

0 Gamma Ray 150  
 -160 RXO/RT 40  
 -200 SP 0

0.2 Deep Resistivity 2000  
 0.2 Medium Resistivity 2000  
 0.2 Shallow Resistivity 2000  
 10000 Line Tension 0

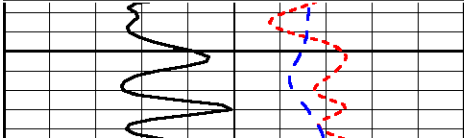
LSPD

Database File: tdihd.db  
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 Charted by: Depth in Feet scaled 1:240

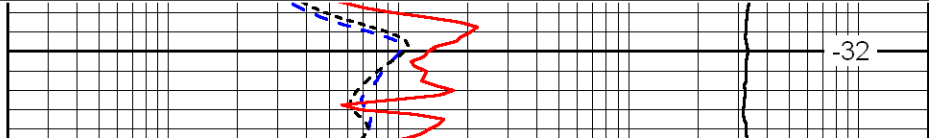
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 -200 SP 0

0.2 Deep Resistivity 2000  
 0.2 Medium Resistivity 2000  
 0.2 Shallow Resistivity 2000  
 10000 Line Tension 0

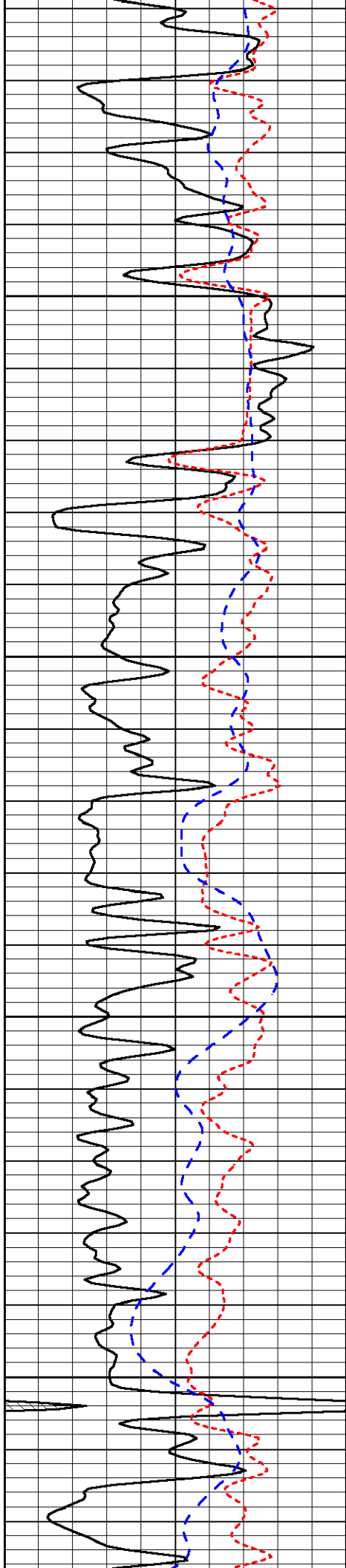
LSPD



2900



-32

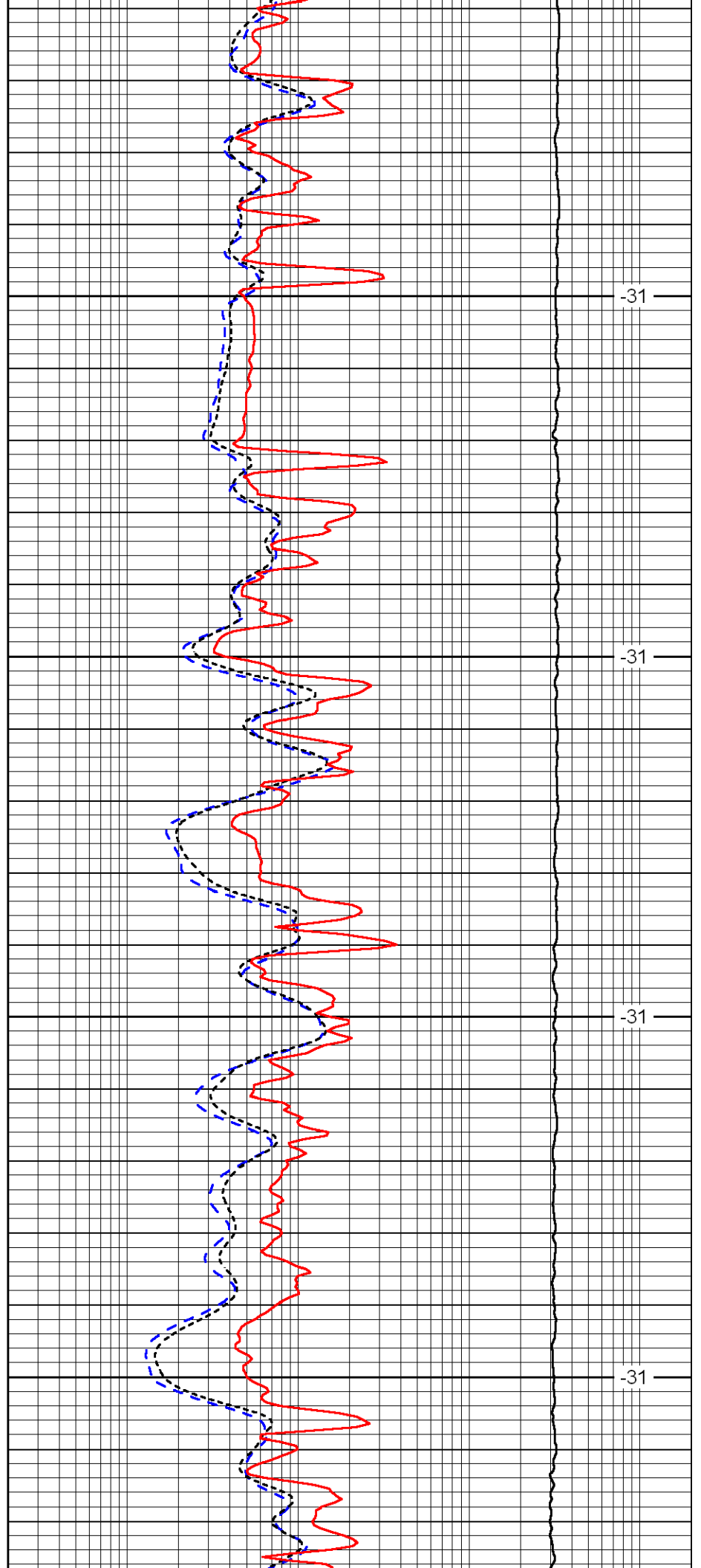


2950

3000

3050

3100

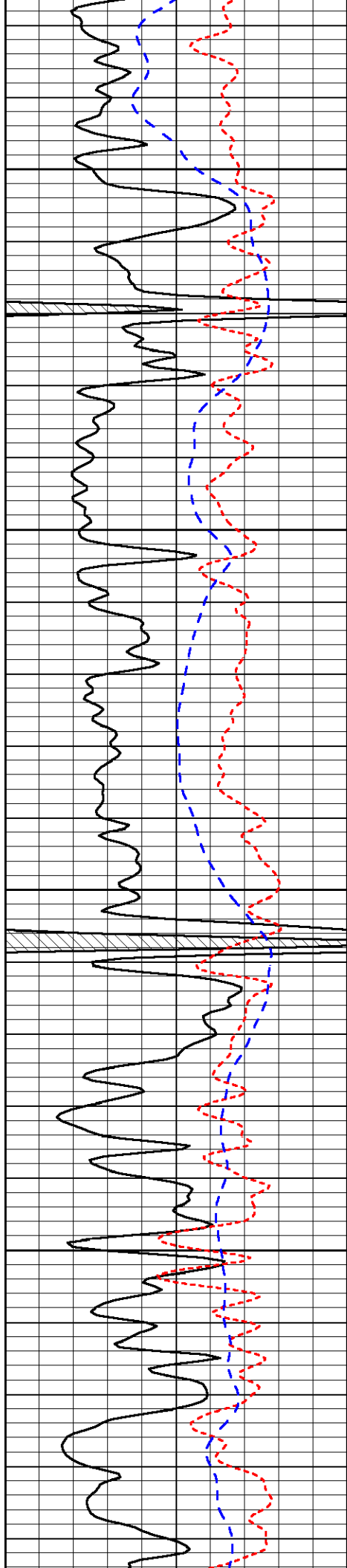


-31

-31

-31

-31

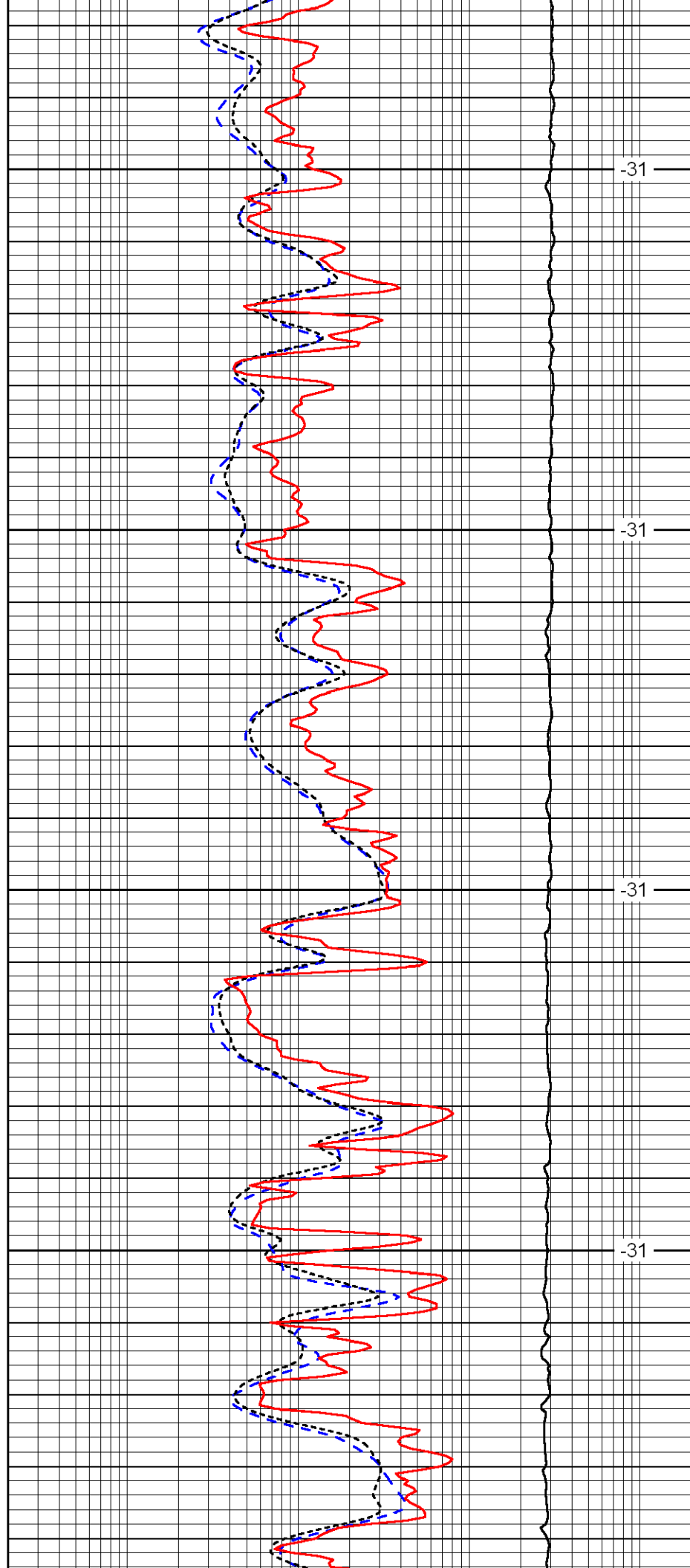


3150

3200

3250

3300

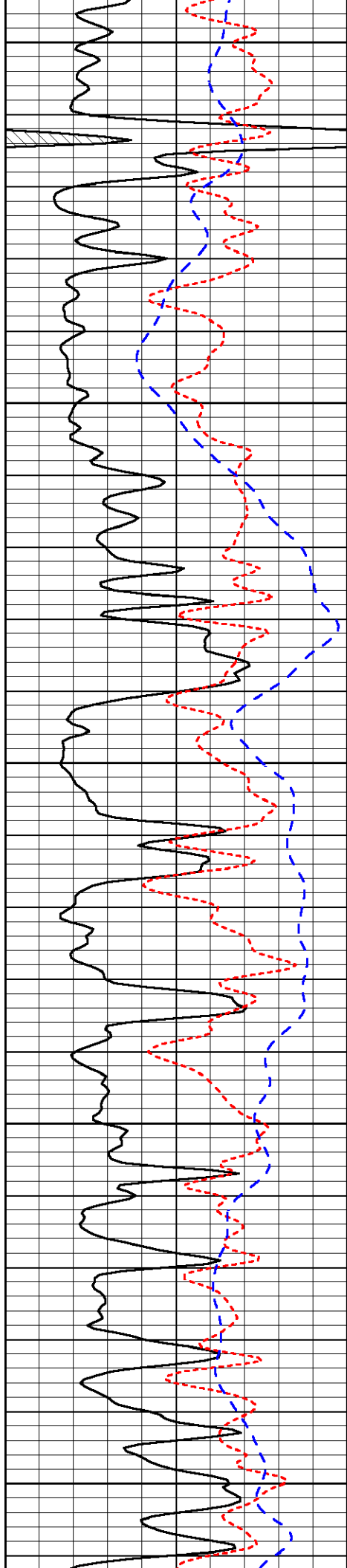


-31

-31

-31

-31



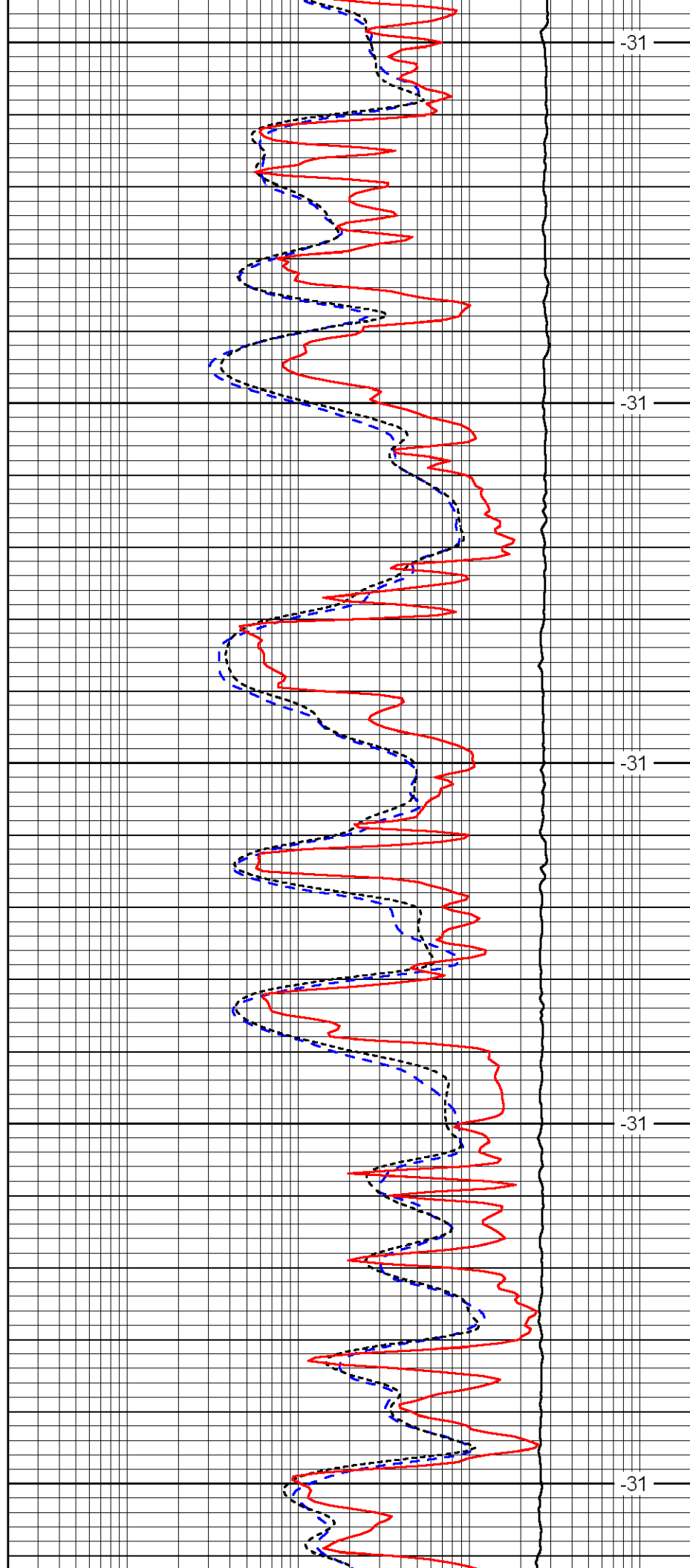
3350

3400

3450

3500

3550



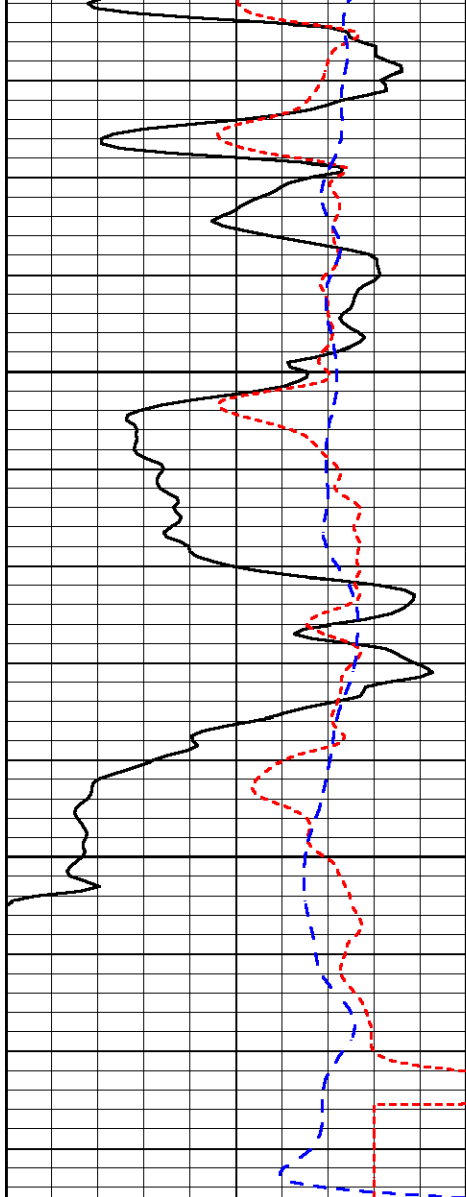
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-31

-31

-31

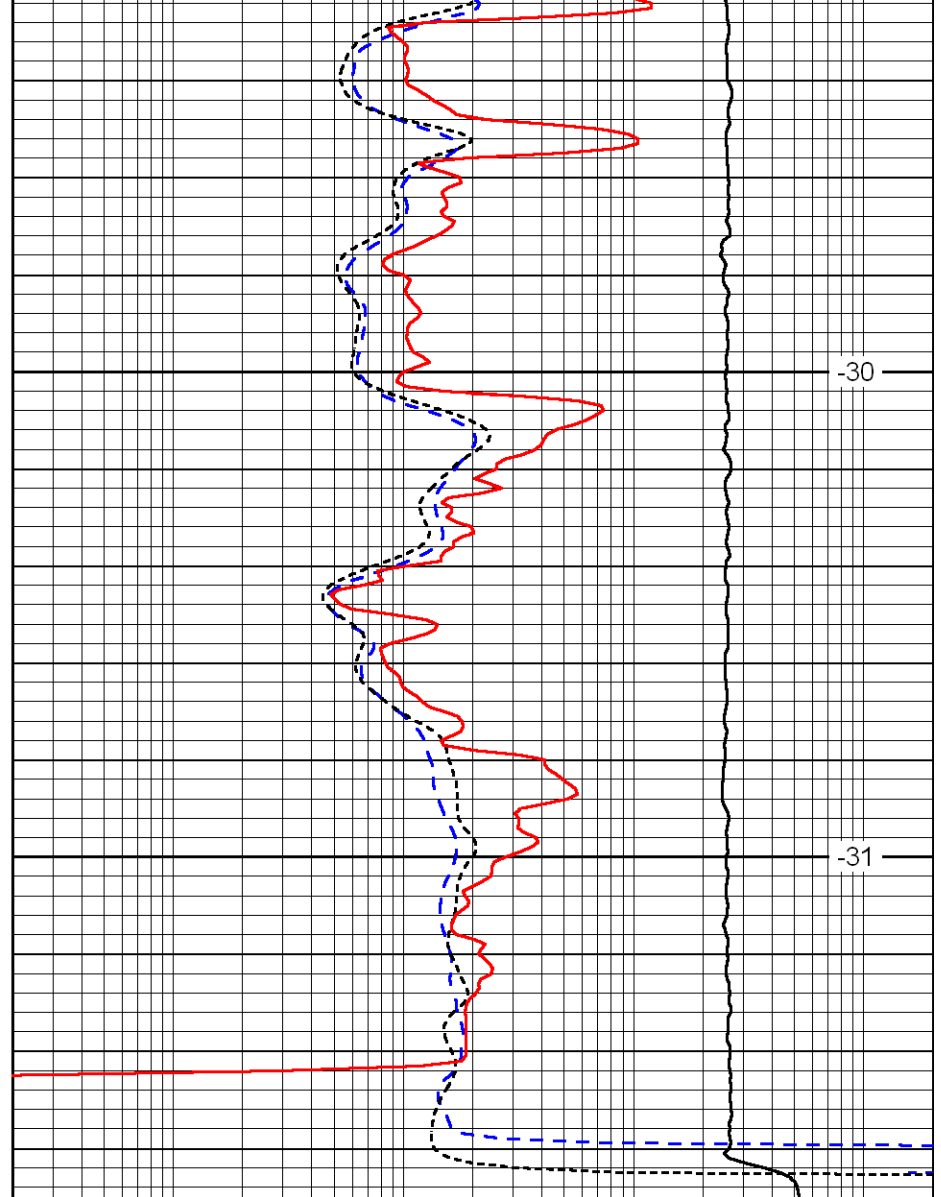
-31



3600

3650

0	Gamma Ray	150
-160	RXO/RT	40
-200	SP	0



-30

-31

0.2	Deep Resistivity	2000
0.2	Medium Resistivity	2000
0.2	Shallow Resistivity	2000
10000	Line Tension	0

LSPD



# Dual Compensated Porosity Log

DIGITAL LOG (785) 625-3858

API No. 15-051-26190-00-00

Company TDI, Inc.  
 Well Charlotte No. 1  
 Field Wildcat  
 County Ellis  
 State Kansas

Location NW - SE - SE - SE  
 430' FSL & 655' FEL

Sec: 15 Twp: 15 S Rge: 19 W

Other Services  
 DIL

Permanent Datum Ground Level Elevation 1994  
 Log Measured From Kelly Bushing 10 Ft. Above Perm. Datum  
 Drilling Measured From Kelly Bushing

K.B. 2004  
 D.F. 1994  
 G.L. 1994

Date 10/14/2011

Run Number One

Type Log CNL / CDL

Depth Driller 3680

Depth Logger 3681

Bottom Logged Interval 3660

Top Logged Interval 2900

Type Fluid In Hole Chemical

Salinity, PPM CL 4000

Density 8.8

Level Full

Max. Rec. Temp. F 113

Operating Rig Time 2-1/2 Hours

Equipment -- Location 17 Hays

Recorded By B. Becker

Witnessed By Tom Denning

Borehole Record				Casing Record			
Run No	Bit	From	To	Size	Wgt. 23#	From	To
One	12.25	00	1202	8.625		00	1202
Two	7.875	1202	TD				

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All interpretations are opinions based on inferences from electrical or other measurements and we cannot and do not guarantee the accuracy or correctness of any interpretation, and we shall not, except in the case of gross or willful negligence on our part, be liable or responsible for any loss, costs, damages, or expenses incurred or sustained by anyone resulting from any interpretation made by any of our officers, agents or employees. These interpretations are also subject to our general terms and conditions set out in our current Price Schedule.

Comments

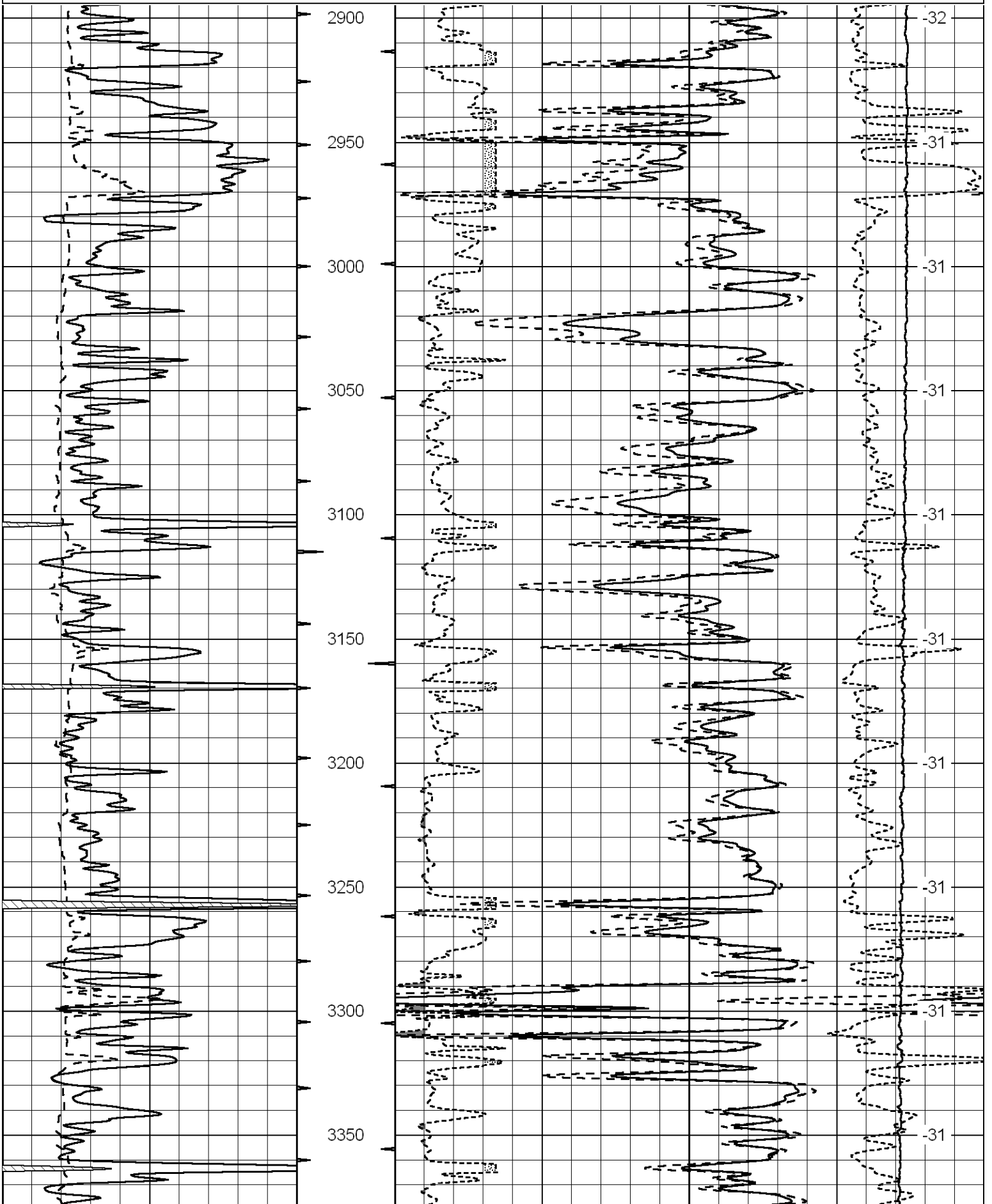
Thank you for using Log-Tech, Inc.  
 (785) 625-3858

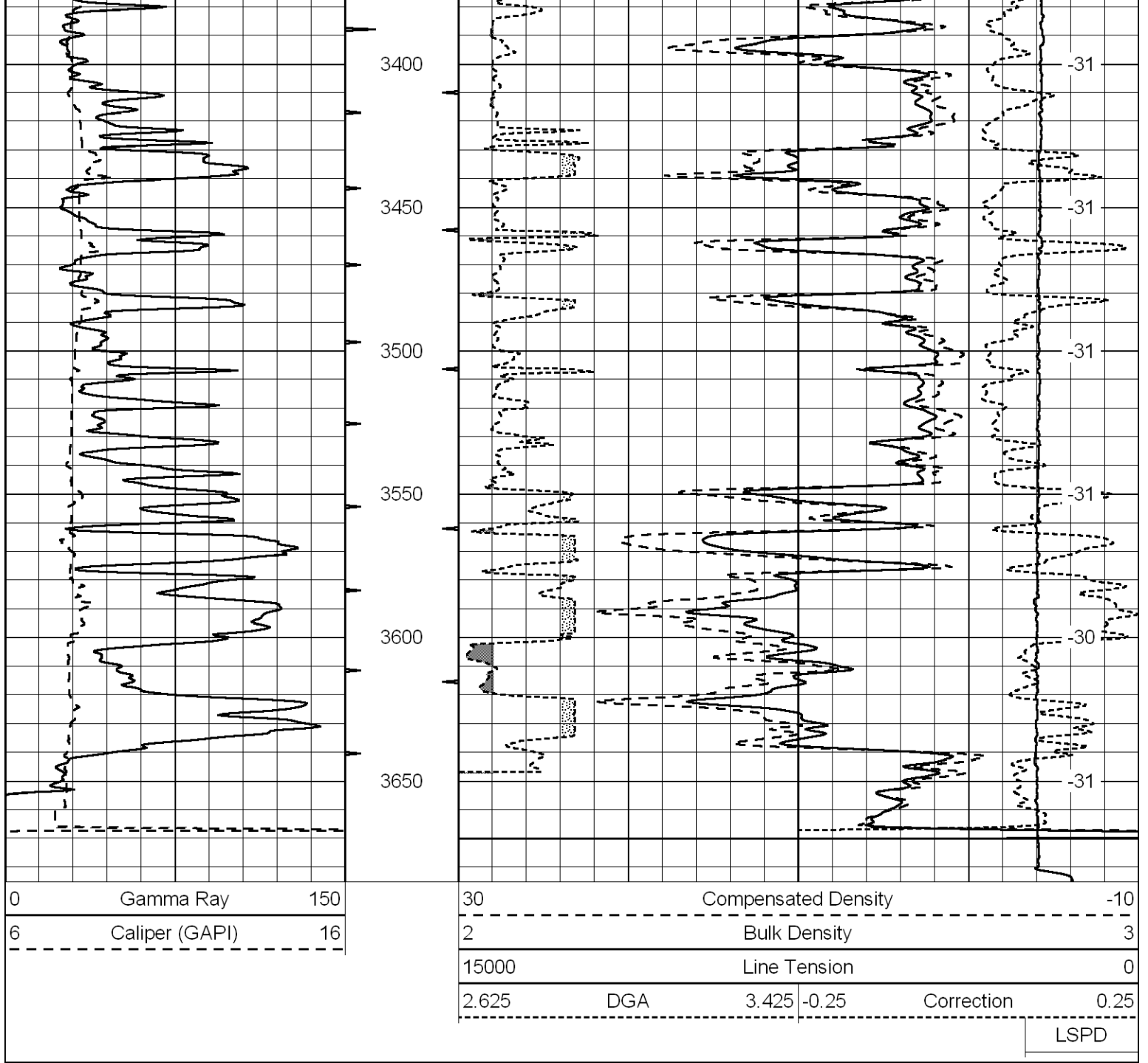
Antonino, Ks; 3 South; 1-1/8 West;  
 North into location

Database File: tdihd.db  
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 Presentation Format: cdl  
 Dataset Creation: Fri Oct 14 07:34:48 2011  
 Charted by: Depth in Feet scaled 1:600

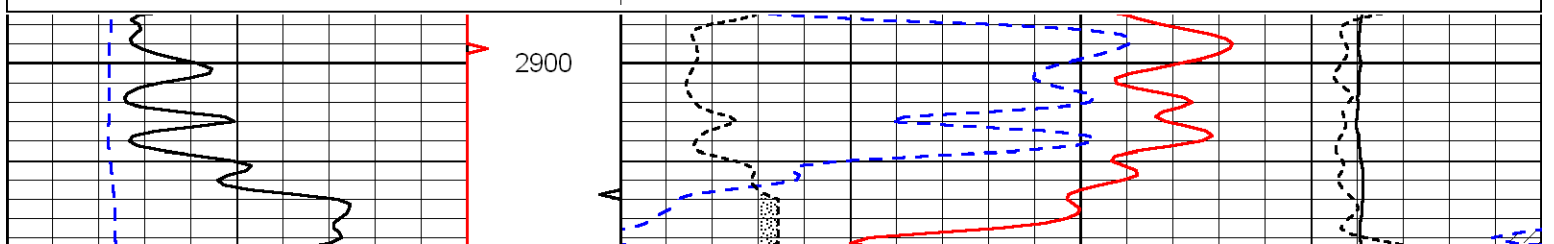
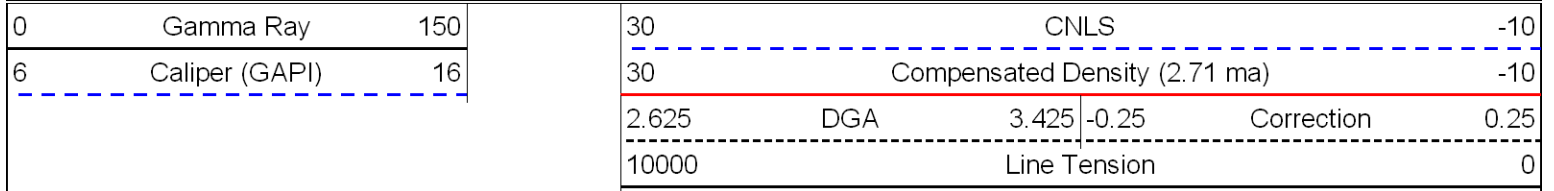
0	Gamma Ray	150
6	Caliper (GAPI)	16

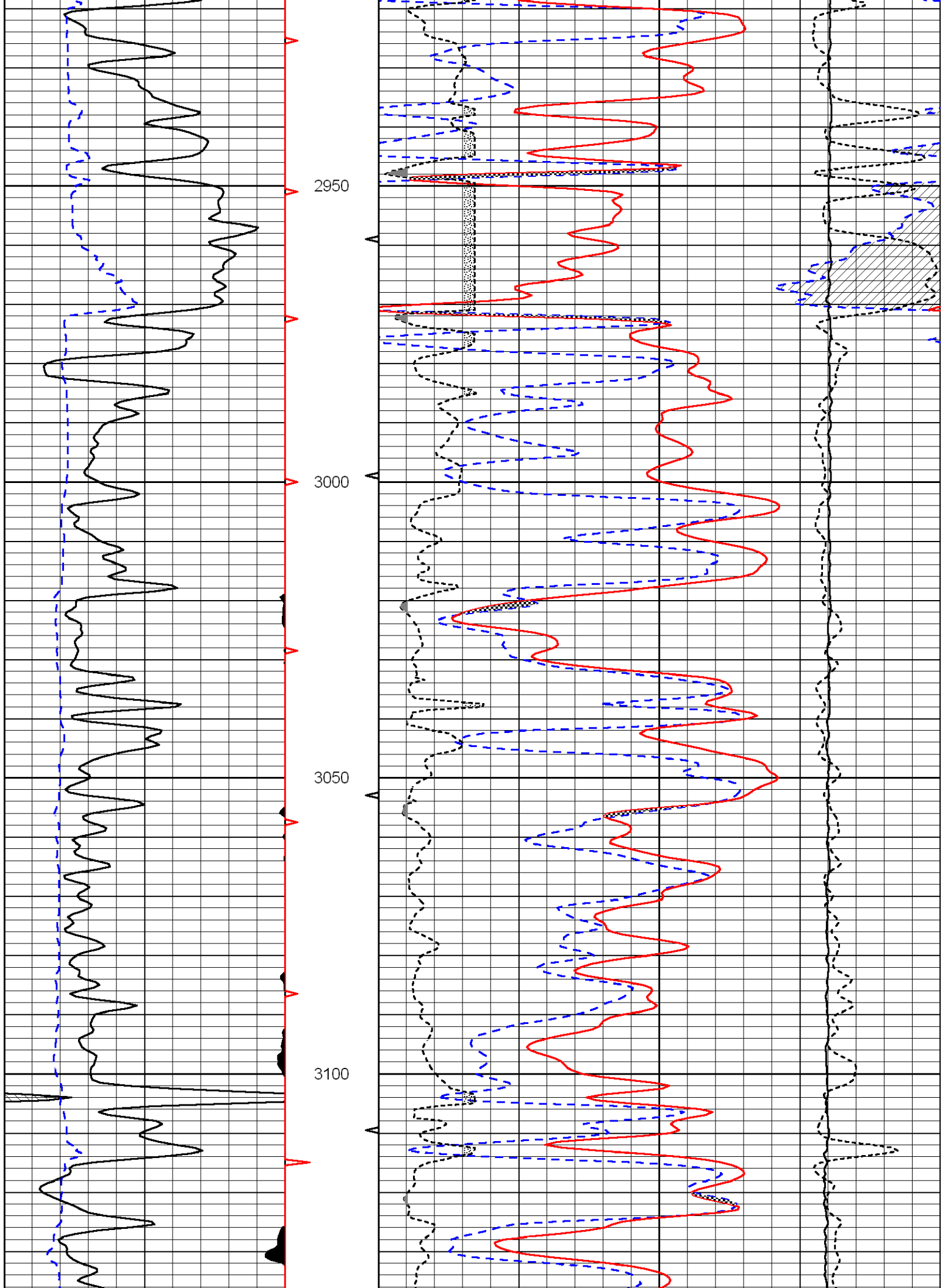
30	Compensated Density		-10
2	Bulk Density		3
15000	Line Tension		0
2.625	DGA	3.425	-0.25
Correction			0.25
LSPD			

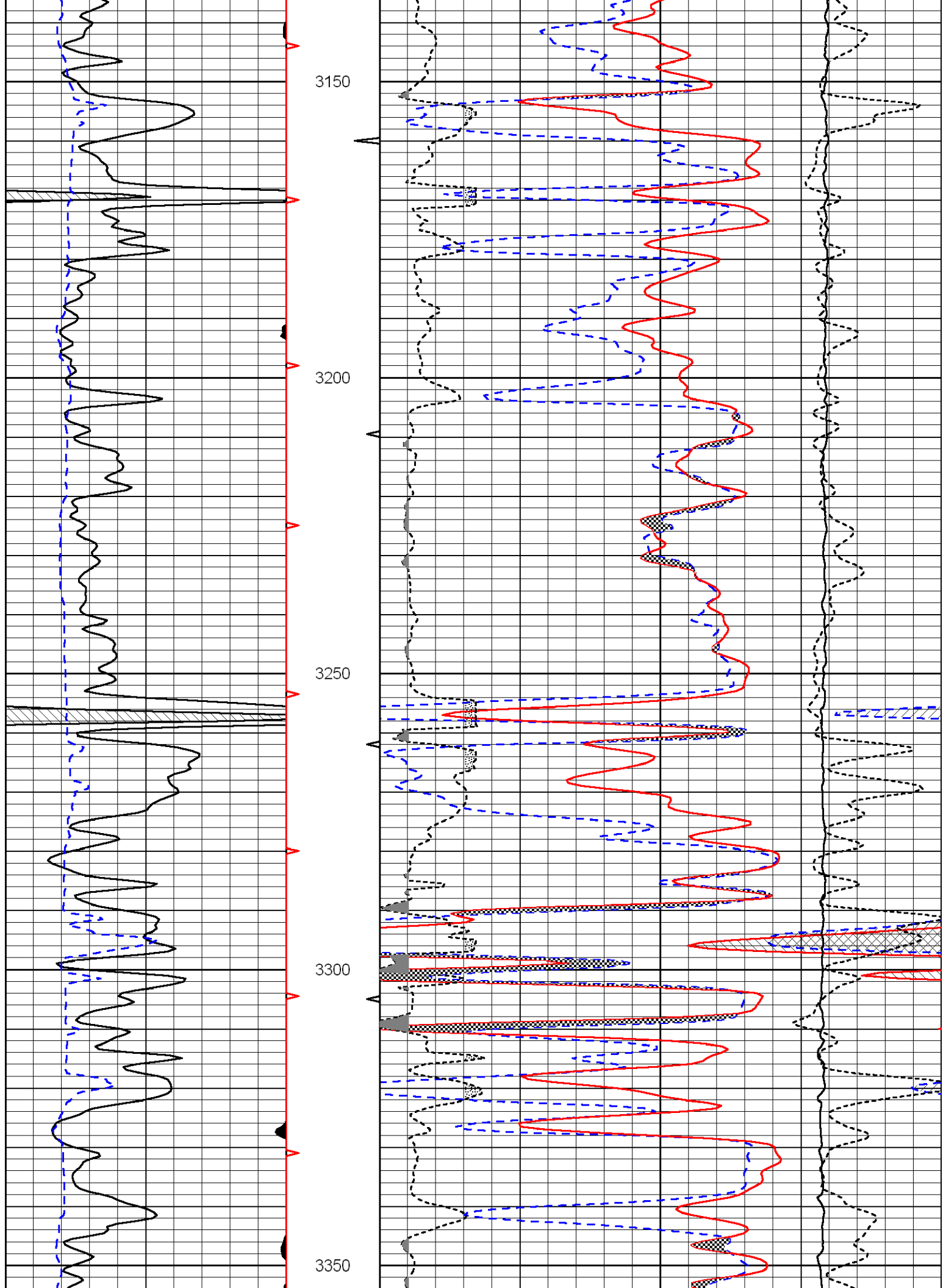


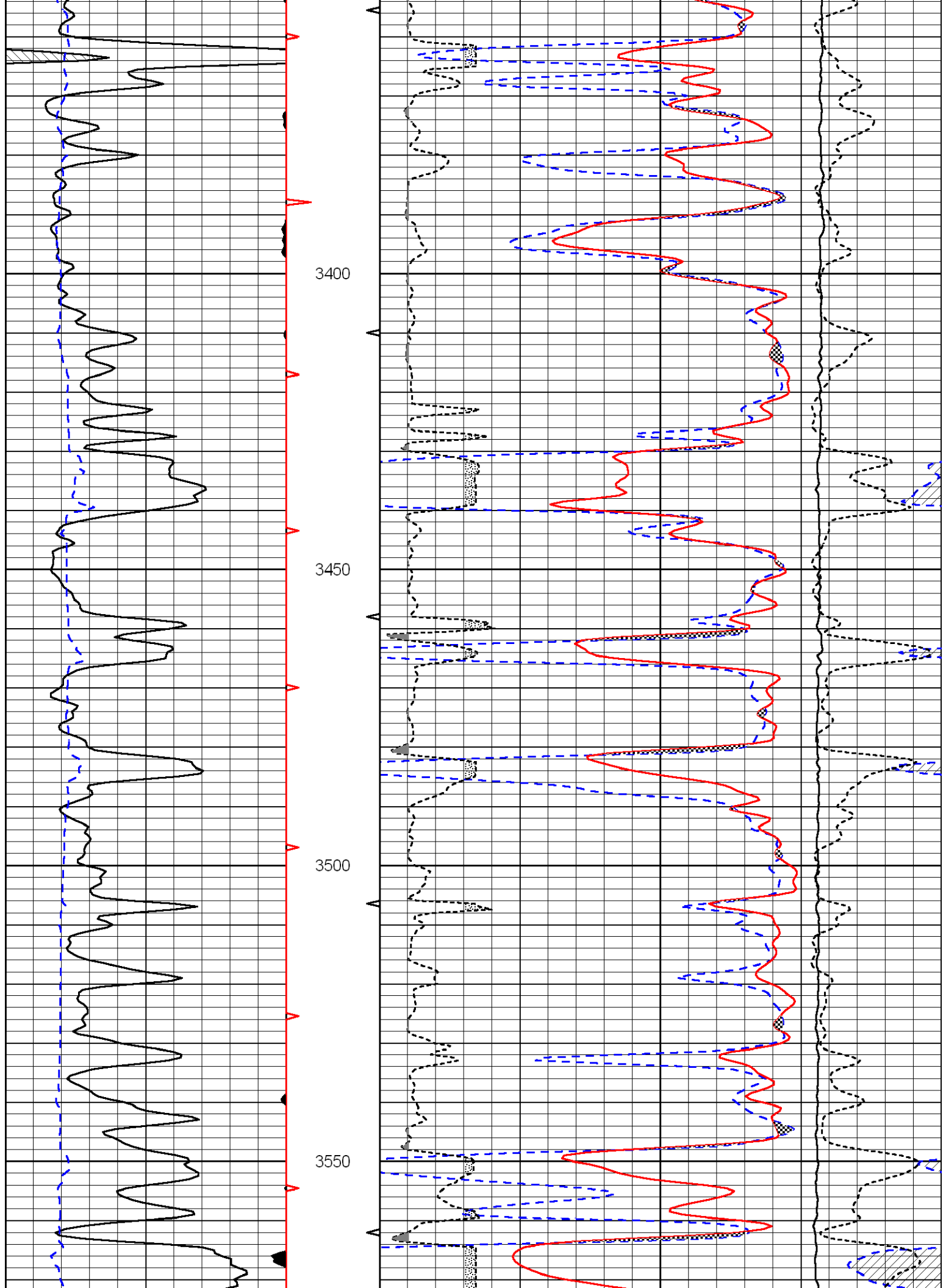


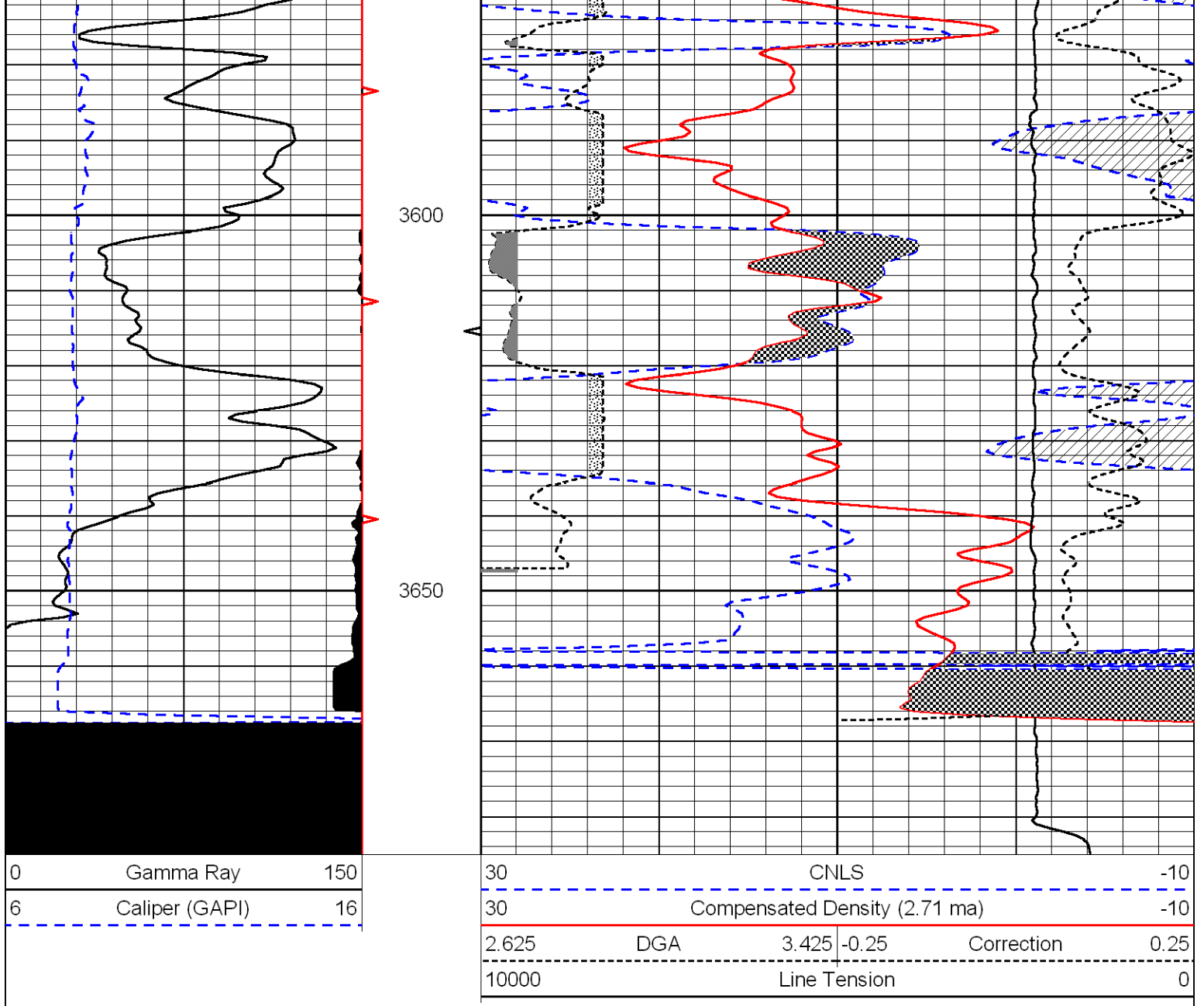
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 Dataset Pathname:      DIL/tdistk  
 Presentation Format:      cndlspec  
 Dataset Creation:      Fri Oct 14 07:34:48 2011  
 Charted by:      Depth in Feet scaled 1:240













Computer Processed  
Interpretation

DIGITAL LOG (785) 625-3858

15-051-26190-00-00

API No.	Company	TDI, Inc.
	Well	Charlotte No. 1
	Field	Wildcat
	County	Ellis
	State	Kansas
Location	NW - SE - SE - SE 430' FSL & 655' FEL	
Sec: 15	Twp: 15 S	Rge: 19 W
Other Services	DIL/CNL/CDL	

Permanent Datum	Ground Level	Elevation 1994
Log Measured From	Kelly Bushing	10 Ft. Above Perm. Datum
Drilling Measured From	Kelly Bushing	
		K.B. 2004
		D.F. 1994
		G.L. 1994

Date Recorded	10/14/2011
Depth Logger	3681
	Curve Definitions

SW	Water Saturation
SXO	Water Saturation In The Flushed Zone
VCL	Volume Of Clay
PHIE	Density - Neutron Crossplot Shale Corrected
BVV	Bulk Volume Water
BVWSXO	Bulk Volume Water In Flushed Zone
DCAL	Caliper
SPC	SP Corrected For Baseline
DGA	Apparent Grain Density
Payflag	If: PHIE> 2 %, VCL < 40 %, SPC> -10 , SW< 50 % & DCAL < 11
Recorded By	B. Becker
Witnessed By	Tom Denning
Analysis By	T. Martin

<<< Fold Here >>>

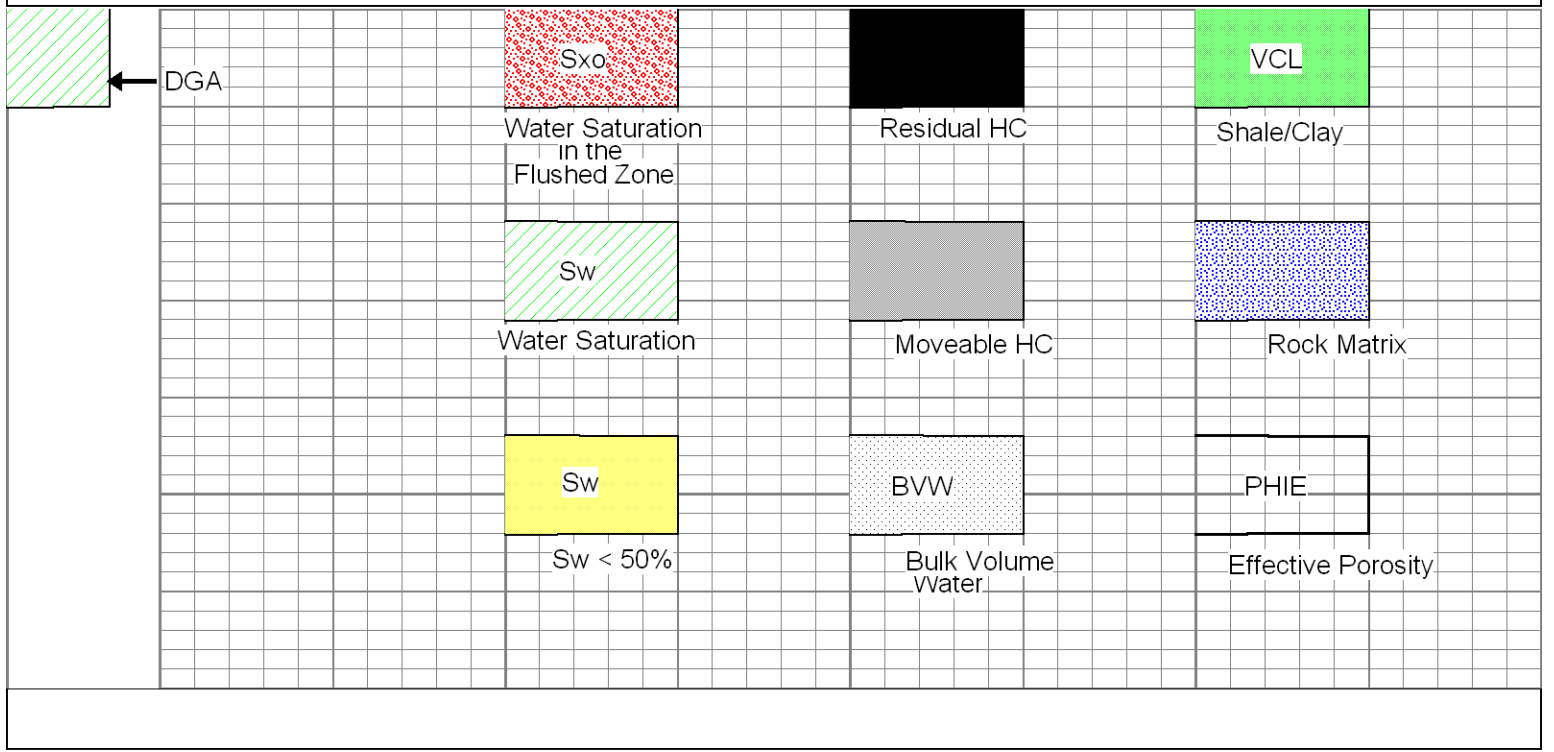
All interpretations are opinions based on inferences from electrical or other measurements and we cannot and do not guarantee the accuracy or correctness of any interpretation, and we shall not, except in the case of gross or willful negligence on our part, be liable or responsible for any loss, costs, damages, or expenses incurred or sustained by anyone resulting from any interpretation made by any of our officers, agents or employees. These interpretations are also subject to our general terms and conditions set out in our current Price Schedule.

Comments

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Antonino, Ks; 3 South; 1-1/8 West;  
North into location

Database File: c:\warrior\data\cross plots\2wxplt.db  
 Dataset Pathname: litho  
 Presentation Format: 2wxplt  
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 Charted by: Depth in Feet scaled 1:240



Database File: c:\warrior\data\tdi\_charlotte\_#1\tdihd.db  
 Dataset Pathname: DIL/tdicpi  
 Presentation Format: calc  
 Dataset Creation: Fri Oct 14 17:25:00 2011  
 Charted by: Depth in Feet scaled 1:240

20	CLF	1	0	Gamma Ray	150	1	SW	0	0.3	PHIE	0	0	VCL	1
2.6	LM	3.1	6	DCAL (GAPI)	16	30	PAYFLAG	0	0.3	BVW	0	1	PHIE	0
	DGA		-150	SPC		0	SXO	0	0.3	BVWSXO	0			
2.6		3.1												

